BRHIP2001805// Homo sapiens TREK-1 potassium channel (KCNK2) mRNA, complete cds.// 1.8E-49// 134aa// 80%// AF129399

BRHIP2001927// Mus musculus mRNA for HS1 binding protein 3.// 2.7E-30// 102aa// 68%// AJ132192

BRHIP2002122// Homo sapiens B aggressive lymphoma long isoform (BAL) mRN A, complete cds.// 1.8E-97// 189aa// 100%// AF307338

BRHIP2002172// Mus musculus urea transporter isoform UTA-3 mRNA, complet e cds.// 6.9E-208// 452aa// 82%// AF258602

BRHIP2002346

BRHIP2003242

BRHIP2003786// CCA3 [Rattus norvegicus]// 2.60E-199// 603aa// 61%// BAA1 9969

BRHIP2003917

BRHIP2004312

BRHIP2004359// ELAC PROTEIN.// 6.80E-20// 111aa// 37%// Q47012

BRHIP2004814// Homo sapiens gibbon ape leukemia virus receptor 1 (SLC20A

1) gene, exon 11 and complete cds.// $1.8E\text{--}188\text{//}\ 346aa\text{//}\ 99\%\text{//}\ AF102063$

BRHIP2004883

BRHIP2005236// latrophilin 2 splice variant baaae // 1.3E-203// 250aa// 97%// AAD05305

BRHIP2005354

BRHIP2005600

BRHIP2005719

BRHIP2005752// NG5 [Homo sapiens]// 5.0E-61// 200aa// 100%// AAB47496

BRHIP2005932

BRHIP2006800

BRHIP2007616// plexin 2// 7.5E-137// 423aa// 59%// BAA13189

BRHIP2007741

BRHIP2009340

```
BRHIP2009414// Bax inhibitor-1 (BI-1) (Testis enhanced gene transcript). 
// 3.00E-97// 177aa// 77%// P55061
```

BRHIP2009474

BRHIP2013699

BRHIP2014228

BRHIP2021615// Homo sapiens CUG-BP and ETR-3 like factor 4 (CELF4) mRNA, complete cds.// 9.60E-115// 349aa// 65%// AF329265

BRHIP2022221

BRHIP2024146

BRHIP2024165// Synthase [Homo sapiens]// 5.00E-44// 83aa// 94%// NM_0038 96

BRHIP2026061

BRHIP2026288// Protein bem46.// 2.00E-47// 110aa// 41%// P54069

BRHIP2029176

BRHIP2029393// COBW-like protein [Homo sapiens]// 3.00E-89// 158aa// 98% // NM 018491

BRHIP3000339// MYELIN BASIC PROTEIN (MBP).// 8.5E-26// 64aa// 90%// P026 86

BRHIP3000526

BRHIP3001283

BRHIP3006683

BRHIP3007483

BRHIP3007586

BRHIP3008183

BRHIP3008313// testis specific ankyrin-like protein 1 [Homo sapiens]// 1 .00E-120// 210aa// 92%// NM_016552

BRHIP3008344

BRHIP3008405// Dynamin 2 (EC 3.6.1.50) (Dynamin UDNM).// 1.00E-56// 108a a// 90%// P39054

```
BRHIP3008565
```

BRHIP3008598

BRHIP3008997

BRHIP3009099

BRHIP3009448// 2-19 protein precursor.// 1.00E-102// 179aa// 99%// P9817

3

BRHIP3011241

BRHIP3013765

BRHIP3013897

BRHIP3015751

BRHIP3016213

BRHIP3018797

BRHIP3020182

BRHIP3024118// Monocarboxylate transporter 4 (MCT 4) (MCT 3).// 1.00E-36

// 108aa// 30%// 035910

BRHIP3024533

BRHIP3024725

BRHIP3025161// Putative Rho/Rac guanine nucleotide exchange factor (Rho/

Rac GEF) (Faciogenital dysplasia protein homolog).// 2.00E-75// 175aa//

30%// P52734

BRHIP3025702

BRHIP3026097

BRHIP3027137// 10-formyltetrahydrofolate dehydrogenase (EC 1.5.1.6) (10-

FTHFDH).// 1.00E-119// 208aa// 93%// 075891

BRHIP3027854// Homo sapiens ectonucleotide pyrophosphatase/phosphodieste

rase 2 (autotaxin) (ENPP2)// 1.00E-130// 222aa// 94%// NM_006209

BRSSN2000684// CDC14 homolog B, isoform 3 [Homo sapiens]// 3.00E-12// 52

aa// 30%// NM_033332

BRSSN2003086

BRSSN2004496// TASP for testis-specific adriamycin sensitivity protein [

Homo sapiens]// 5.00E-45// 101aa// 39%// NM_018697

BRSSN2004719// SHC transforming protein.// 4.00E-39// 89aa// 53%// P2935

BRSSN2006892

BRSSN2008549// oxysterol binding protein 2 [Mus musculus]// 1.00E-149//

252aa// 75%// NM_024289

BRSSN2008797

BRSSN2011262

BRSSN2011738

BRSSN2013874// TEMO [Rattus norvegicus]// 2.00E-53// 99aa// 98%// NM_023 986

BRSSN2014299// TPA inducible gene-1; TPA inducible protein [Homo sapiens]// 2.00E-47// 93aa// 86%// NM_015889

BRSSN2014424// transporter-like protein [Homo sapiens]// 0// 413aa// 92% // NM_022109

BRSSN2014556

BRSSN2018581

BRSSN2018925

BRSTN2000872// Protein disulfide isomerase A2 precursor (EC 5.3.4.1) (PD Ip).// 0// 341aa// 92%// Q13087

BRSTN2001067

BRSTN2001613// HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEINS C1/C2 (HNRNP C1

AND HNRNP C2).// 2.8E-34// 214aa// 43%// P07910

BRSTN2002400

BRSTN2003835

BRSTN2004863// Drosophila melanogaster polypeptide N-acetylgalactosaminy ltransferase mRNA, complete cds.// 5.60E-126// 526aa// 47%// AF158747 BRSTN2004987// Homo sapiens mRNA for mitochondrial tryptophanyl-tRNA syn

thetase (WARS2 gene).// 1.20E-162// 360aa// 86%// AJ242739 BRSTN2005721 BRSTN2006865 BRSTN2007000 BRSTN2007284 BRSTN2008052 BRSTN2008283 BRSTN2008418// Breakpoint cluster region protein (EC 2.7.1.-).// 7.00E-3 3// 70aa// 75%// P11274 BRSTN2008457 BRSTN2009899 BRSTN2010363 BRSTN2010500 BRSTN2010750 BRSTN2012320 BRSTN2012380 BRSTN2013741// Ras-related protein M-Ras (Ras-related protein R-Ras3).// 1.00E-105// 189aa// 90%// 014807 BRSTN2015015 BRSTN2016470 BRSTN2016678 BRSTN2017084 BRSTN2017110 BRSTN2017237 BRSTN2017771// Homo sapiens putative BTK-binding protein mRNA, complete cds.// 1.0E-41// 90aa// 99%// AF235049 BRSTN2018083 BRSTN2019129

BRTHA1000311

BRTHA2000855

BRTHA2001462

BRTHA2002115

BRTHA2002281// Rho guanine nucleotide exchange factor 10 [Homo sapiens].

// 5.0E-26// 123aa// 39%// NP_055444.1

BRTHA2002376

BRTHA2002442

BRTHA2002493

BRTHA2002608// aldehyde dehydrogenase 1A3// 2.00E-19// 46aa// 88%// NP_0

00684

BRTHA2002808// GAMMA-INTERFERON-INDUCIBLE PROTEIN IP-30 PRECURSOR.// 7.8

E-65// 141aa// 90%// P13284

BRTHA2003030

BRTHA2003110// Protein Clorf8 precursor (Liver membrane-bound protein) (

HSPC001).// 1.00E-98// 178aa// 92%// Q9BXS4

BRTHA2003116

BRTHA2003461

BRTHA2004821

BRTHA2004978

BRTHA2005579// Xenopus laevis mRNA for Kielin, complete cds.// 1.3E-190/

/ 659aa// 47%// AB026192

BRTHA2005956

BRTHA2006075

BRTHA2006146

BRTHA2006194

BRTHA2007122// ANKYRIN 2 (BRAIN ANKYRIN) (ANKYRIN B) (ANKYRIN, NONERYTHR

OID).// 6.1E-18// 203aa// 32%// Q01484

BRTHA2007422

BRTHA2007603// H. sapiens mRNA for BCL7B protein.// 1.8E-56// 116aa// 98%

// X89985

BRTHA2008316

BRTHA2008335

BRTHA2008527// LUTROPIN-CHORIOGONADOTROPIC HORMONE RECEPTOR PRECURSOR (L

H/CG-R) (LSH-R) (LUTEINIZING HOROMINE RECEPTOR).// 7.5E-66// 189aa// 73%

// P22888

BRTHA2008535

BRTHA2008955

BRTHA2009311// EOSINOPHIL LYSOPHOSPHOLIPASE// 1.0E-30// 64aa// 91%// P97

400

BRTHA2009846

BRTHA2009972

BRTHA2010073

BRTHA2010608

BRTHA2010884

BRTHA2010907

BRTHA2011194

BRTHA2011351

BRTHA2011500

BRTHA2011641

BRTHA2012392// Homo sapiens HCDI (HCDI) mRNA, complete cds.// 8.0E-95//

194aa// 95%// AF226050

BRTHA2012562

BRTHA2012980// INTERLEUKIN-13 RECEPTOR ALPHA-1 CHAIN PRECURSOR (IL-13R-A

LPHA-1) (IL- 13RA-1).// 1.5E-44// 91aa// 100%// P78552

BRTHA2013262

BRTHA2013460

BRTHA2013707

BRTHA2014792// ENHANCER OF ZESTE HOMOLOG 1 (ENX-2) (KIAA0388).// 7.1E-21

// 184aa// 35%// Q92800

BRTHA2014828

BRTHA2015406// Homo sapiens mRNA for putative serine/threonine protein \boldsymbol{k}

inase, partial.// 1.90E-86// 268aa// 67%// AJ006701

BRTHA2015478

BRTHA2015696

BRTHA2015878

BRTHA2016215

BRTHA2016496// Vacuolar processing enzyme precursor (EC 3.4.22.-) (VPE).

// 0// 370aa// 79%// P49043

BRTHA2016543

BRTHA2017353

BRTHA2017985

BRTHA2018165

BRTHA2018344

BRTHA2018591

BRTHA2018624// Oncorhynchus mykiss stl3 mRNA for rhamnose binding lectin STL3, complete cds.// 7.40E-21// 167aa// 34%// AB039024

BRTHA2018707

BRTHA2019014

BRTHA2019022

BRTHA2019048

BRTHA3000273

BRTHA3000297

BRTHA3000633// single-pass transmembrane protein [Rattus norvegicus]// 5 .00E-48// 220aa// 54%// BAA90767

BRTHA3001721// TATA box binding protein (TBP)-associated factor, RNA polymerase III, GTF3B subunit 2; TATA box binding protein (TBP)-associated factor, RNA polymerase III, C, 90kD; general transcription factor IIIB,

90kD [Homo sapiens]// 4.00E-71// 135aa// 85%// NM_001519

BRTHA3002401

BRTHA3002427// Sodium- and chloride-dependent betaine transporter (Na+/C l- betaine/GABA transporter) (BGT-1).// 0// 553aa// 96%// P48065

BRTHA3002933// uroplakin 3 [Homo sapiens]// 1.00E-158// 260aa// 99%// XP $_001216$

BRTHA3003074// putative prostate cancer susceptibility protein; hypothet ical protein FLJ10530 [Homo sapiens]// 0// 435aa// 94%// NM_018127

BRTHA3003343// DAZ associated protein 1 [Homo sapiens]// 1.00E-95// 223a a// 92%// NP_061832

BRTHA3003449// MYOSIN HEAVY CHAIN, SMOOTH MUSCLE ISOFORM (SMMHC) (FRAGME NT).// 4.70E-215// 400aa// 100%// P35749

BRTHA3003474

BRTHA3003490

BRTHA3004475

BRTHA3005046

BRTHA3006856

BRTHA3007113

BRTHA3007148

BRTHA3007319

BRTHA3007769

BRTHA3008143

BRTHA3008310// Mus musculus mRNA for iroquois homeobox protein 6 (Irx6 g ene).// 1.20E-176// 444aa// 76%// AJ271055

BRTHA3008386

BRTHA3008520// sporulation-induced transcript 4-associated protein; hypothetical protein FLJ11058 [Homo sapiens]// 1.00E-164// 287aa// 87%// NM_ 018312

BRTHA3008778// Acetyl-coenzyme A synthetase (EC 6.2.1.1) (Acetate--CoA l

igase) (Acyl- activating enzyme).// 1.00E-168// 286aa// 51%// 068040

BRTHA3009037// Regulator of G-protein signaling 3 (RGS3) (RGP3).// 0// 4

79aa// 92%// P49796

BRTHA3009090// neuropathy target esterase [Homo sapiens]// 0// 784aa// 6

0%// NM_006702

BRTHA3009291

BRTHA3010366

BRTHA3013884// Sorting nexin 14 (Fragment).// 0// 359aa// 95%// Q9Y5W7

BRTHA3015815// Selenide, water dikinase 1 (EC 2.7.9.3) (Selenophosphate s

ynthetase 1) (Selenium donor protein 1).// 1.00E-159// 275aa// 99%// P49

903

BRTHA3015910

BRTHA3016845

BRTHA3016917// Valyl-tRNA synthetase 2 (EC 6.1.1.9) (Valine--tRNA ligase

2) (VALRS 2).// 4.00E-82// 169aa// 43%// P26640

BRTHA3017047

BRTHA3017589// junctional adhesion molecule 3 [Homo sapiens]// 1.00E-119 // 213aa// 74%// NM_031470

BRTHA3017848// Organic cation/carnitine transporter 2 (Solute carrier fa mily 22, member 5) (High-affinity sodium-dependent carnitine cotransport er).// 2.00E-42// 105aa// 35%// 076082

BRTHA3018514

BRTHA3018617

BRTHA3018656

BRTHA3019105

CERVX1000042

CERVX2002006

COLON1000030

COLON2000470// Rattus norvegicus nucleolar protein C7C mRNA, complete cd

s.// 5.9E-51// 187aa// 49%// AF333986

COLON2000568// Ig alpha-2 chain C region.// 0// 324aa// 95%// P01877

COLON2001721// GLUT4 vesicle protein [Mus musculus]// 8.00E-36// 160aa// 39%// AAD10190

COLON2002443

COLON2002520// Myosin heavy chain, nonmuscle type B (Cellular myosin heavy chain, type B) (Nonmuscle myosin heavy chain-B) (NMMHC-B).// 0// 447a a// 70%// Q27991

COLON2003043

COLON2004478// protein Tro alphal H, myeloma // 3.2E-233// 475aa// 88%// 0501254A

COLON2005126

COLON2005772// Homo sapiens candidate taste receptor T2R14 gene, complet e cds.// 3.9E-54// 112aa// 97%// AF227138

COLON2006282

COLON2009499

CORDB1000140

CORDB2000061

CORDB2000541// F-actin capping protein beta subunit (CAPZ beta).// 1.00E -126// 217aa// 99%// P79136

CTONG1000087

CTONG1000088

CTONG1000288

CTONG1000302

CTONG1000341// THROMBOMODULIN PRECURSOR (FETOMODULIN) (TM) (CD141 ANTIGE N).// 1.0E-283// 488aa// 99%// P07204

CTONG1000467// Mus musculus mRNA for Deltex3, complete cds.// 5.00E-54// 203aa// 52%// AB015425

CTONG1000540

CTONG2000042// ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA-2-M).// 2E-132// 8

4laa// 35%// P01023

CTONG2001877

CTONG2004062// ATPase subunit 6 [Homo sapiens].// 3.00E-71// 226aa// 91% // BAA07295

CTONG2006798// putative serine/threonine protein kinase [Schizosaccharom vces pombe]// 5.80E-69// 581aa// 27%// CAB66438

CTONG2008233// Bos taurus DnaJ1 protein mRNA, complete cds.// 0// 1376bp // 85%// AF308815

CTONG2009423// 5-HYDROXYTRYPTAMINE 7 RECEPTOR (5-HT-X) (SEROTON IN RECEPTOR) (5HT7).// 2.40E-44// 113aa// 78%// P34969

CTONG2009531

CTONG2010803// Regulator of G-protein signaling 3 (RGS3) (RGP3).// 0// 3 23aa// 92%// P49796

CTONG2013178// Homo sapiens serine protease DESC1 (DESC1) mRNA, complete cds.// 2E-90// 421aa// 43%// AF064819

CTONG2017500// Homo sapiens muscle disease-related protein mRNA, complet e cds.// 1.30E-59// 239aa// 47%// AF204674

CTONG2019248

CTONG2019652

CTONG2019704

CTONG2019788

CTONG2019833

CTONG2020026// Drosophila melanogaster BcDNA.GH09358 (BcDNA.GH09358) mRN

A, complete cds.// 4.2E-187// 669aa// 45%// AF181639

CTONG2020127

CTONG2020806

CTONG2021132

CTONG2022153

CTONG2022601

CTONG2023021// H.sapiens mRNA for TFG protein.// 2.3E-88// 160aa// 100%/ / Y07968

CTONG2023512// Homo sapiens PIG-T mRNA for phosphatidyl inositol glycan class T, complete cds.// 7.1E-158// 289aa// 100%// AB057724

CTONG2024206

CTONG2024749// ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA-2-M).// 1.1E-174// 699aa// 46%// P06238

CTONG2025496// ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA-2-M).// 1.2E-218// 977aa// 45%// P01023

CTONG2025516// general transcription factor II, i, isoform 3; BTK-associ ated protein, 135kD; Williams-Beuren syndrome chromosome region 6; Bruto n tyrosine kinase-associated protein 135; TFII-I protein; SPIN protein [Homo sapiens]// 2.00E-28// 57aa// 89%// NM_033001

CTONG2025900

CTONG2026920

CTONG2027327

CTONG2028124// very long-chain acyl-CoA synthetase homolog 1; VLCS-H1 pr otein [Homo sapiens]// 5.00E-86// 156aa// 48%// NM_014031

CTONG2028687

CTONG3000084// PROBABLE GUANINE NUCLEOTIDE REGULATORY PROTEIN TIM (ONCOGENE TIM) (P60 TIM) (TRANSFORMING IMMORTALIZED MAMMARY ONCOGENE).// 4.3E-276// 519aa// 100%// Q12774

CTONG3000657

CTONG3000896

CTONG3001123// Mus musculus Pax transcription activation domain interact ing protein PTIP mRNA, complete cds.// 0// 965aa// 84%// AF104261

CTONG3001370// ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA2M).// 1.5E-267// 1

008aa// 38%// Q61838

CTONG3001420

CTONG3001560

CTONG3002020

CTONG3002127// granuphilin [Mus musculus]// 1.00E-104// 204aa// 49%// NM _013757

CTONG3002412// Human DOCK180 protein mRNA, complete cds.// 4.5E-236// 67

8aa// 66%// D50857

CTONG3002674

CTONG3003179

CTONG3003483

CTONG3003652

CTONG3003654

CTONG3003737// PLATELET GLYCOPROTEIN V PRECURSOR (GPV) (CD42D).// 1.80E-

73// 434aa// 37%// 008770

CTONG3003905

CTONG3003972

CTONG3004072// GL002 protein [Homo sapiens]// 3.00E-80// 152aa// 88%// N

 M_020193

CTONG3004712

CTONG3005325

CTONG3005648

CTONG3005713

CTONG3006186// syntaxin binding protein 4 [Mus musculus]// 0// 427aa// 7

6%// NM_011505

CTONG3006650

CTONG3007444

CTONG3007528

CTONG3007586

CTONG3007870

CTONG3008252

CTONG3008258// Homo sapiens GROS1-L protein mRNA, complete cds.// 7.70E-

177// 680aa// 51%// AF097432

CTONG3008496

CTONG3008566

CTONG3008639// Human non-lens beta gamma-crystallin like protein (AIM1)

mRNA, partial cds.// 0// 836aa// 99%// U83115

CTONG3008831// Rattus norvegicus PGC1 mRNA for PPAR gamma coactivator, c

omplete cds.// 2.9E-69// 176aa// 46%// AB025784

CTONG3008894// Mus musculus SH3-domain binding protein 5// 3.00E-42// 89

aa// 40%// NM_011894

CTONG3008951

CTONG3009028// sno gene product [Drosophila melanogaster]// 1.00E-148//

1000aa// 46%// AAF48240

CTONG3009227

CTONG3009239

CTONG3009328

CTONG3009385// Homo sapiens ARG99 mRNA, complete cds.// 2.4E-77// 153aa/

/ 100%// AF319520

 ${\tt D30ST2002182//\ Homo\ sapiens\ mRNA\ for\ acetylglucosaminyltransferase-like}$

protein.// 6.50E-11// 265aa// 23%// AJ007583

D30ST2002648// PUTATIVE G PROTEIN-COUPLED RECEPTOR GPR17 (R12).// 3E-24// 184aa// 28%// Q13304

D30ST3000169// Homo sapiens SH3-SAM adaptor protein (HACS1) mRNA, comple te cds.// 2.40E-189// 354aa// 99%// AF218085

DFNES1000107

DFNES2000146// Mus musculus mRNA for thrombospondin type 1 domain, complete cds.// 4.10E-31// 135aa// 41%// AB016768

DFNES2001108// Homo sapiens nuclear dual-specificity phosphatase (SBF1) mRNA, partial cds.// 4.5E-41// 134aa// 63%// U93181

DFNES2005266// ADAM-TS 1 PRECURSOR (EC 3.4.24.-) (A DISINTEGRIN AND META LLOPROTEINASE WITH THROMBOSPONDIN MOTIFS 1) (ADAMTS-1) (ADAM-TS1).// 4.8 0E-15// 118aa// 30%// P97857

DFNES2010502

DFNES2011239

DFNES2011499

ERLTF2000324

FCBBF1000297// Human protein immuno-reactive with anti-PTH polyclonal an tibodies mRNA, partial cds.// 7.5E-186// 359aa// 99%// U28831

FCBBF2001183

FCBBF2007510

FCBBF3001977

FCBBF3002163// chromosome condensation-related SMC-associated protein 1; chromosome condensation-related SMC-associated protein 1; KIAA0159 gene product [Homo sapiens]// 0// 840aa// 97%// NM_014865

FCBBF3003435

FCBBF3004502

FCBBF3004847

FCBBF3006171

FCBBF3007242

FCBBF3007540// GUANINE NUCLEOTIDE EXCHANGE FACTOR DBS (DBL'S BIG SISTER)
// 5.00E-46// 300aa// 38%// 015068

FCBBF3008944

FCBBF3009888// Homo sapiens prostate stem cell antigen (PSCA) mRNA, comp lete cds.// 5.30E-06// 122aa// 32%// AF043498

FCBBF3012170// Mus musculus rostral cerebellar malformation protein (rcm) mRNA, complete cds.// 1.00E-80// 325aa// 51%// U72634

FCBBF3012288

FCBBF3013307// Homo sapiens RNA helicase-related protein mRNA, complete cds.// 0// 644aa// 99%// AF083255

FCBBF3013846

FCBBF3021576

FCBBF3021940// SYNAPSIN I (FRAGMENT).// 5.00E-06// 128aa// 35%// 062732

FCBBF3023443

FCBBF3023895// contains similarity to tubulin-tyrosine ligase [Caenorhabd itis elegans].// 1.00E-54// 220aa// 39%// AAF39893

FCBBF3025730

FCBBF3027717

FCBBF4000076

FEBRA1000030// T-CELL RECEPTOR BETA CHAIN ANA 11.// 2.7E-11// 131aa// 38 %// P06333

FEBRA2000253

FEBRA2006396

FEBRA2007544// transcription factor [Homo sapiens]// 0// 400aa// 99%// AAG33674

FEBRA2007708// DRA PROTEIN (DOWN-REGULATED IN ADENOMA).// 2.60E-72// 511 aa// 34%// P40879

FEBRA2007793

FEBRA2007801// Homo sapiens TRIAD3 mRNA, partial cds.// 2.3E-207// 358aa

```
// 99%// AF228527
```

FEBRA2008287

FEBRA2008311// GALANIN RECEPTOR TYPE 1 (GAL1-R) (GALR1).// 1E-23// 299aa // 27%// P56479

FEBRA2008360

FEBRA2008468// LYSOSOMAL ACID LIPASE/CHOLESTERYL ESTER HYDROLASE PRECURS OR (EC 3.1.1.13) (LAL) (ACID CHOLESTERYL ESTER HYDROLASE) (STEROL ESTERA SE) (LIPASE A) (CHOLESTERYL ESTERASE).// 1.20E-179// 330aa// 97%// P3857 1

FEBRA2010719

FEBRA2014213

FEBRA2015588

FEBRA2020484

FEBRA2020582

FEBRA2020668

FEBRA2020886

FEBRA2021339

FEBRA2021571

FEBRA2021908

FEBRA2021966

FEBRA2024136

FEBRA2024150

FEBRA2024343

FEBRA2024744// Homo sapiens Cat Eye Syndrome critical region protein iso form 1 mRNA, complete cds.// 1.3E-126// 252aa// 94%// AF273270

FEBRA2025427

FEBRA2026984// TYROSYL-TRNA SYNTHETASE (EC 6.1.1.1) (TYROSYL-TRNA LIGAS E) (TYRRS) (FRAGMENT).// 7.80E-271// 528aa// 94%// Q29465

FEBRA2027082

FEBRA2027297

FEBRA2027352

FEBRA2028366

FEBRA2028477

FEBRA2028618

HCASM2001301// MITOGEN-ACTIVATED PROTEIN KINASE 12 (EC 2.7.1.-) (EXTRACE LLULAR SIGNAL-REGULATED KINASE 6) (EC 2.7.1.-) (ERK6) (ERK5) (STRESS- AC TIVATED PROTEIN KINASE-3) (MITOGEN-ACTIVATED PROTEIN KINASE P38 GAMMA) (

MAP KINASE P38 GAMMA).// 2.2E-52// 104aa// 100%// P53778

HCASM2002502

HCASM2002918

HCASM2003212

HCASM2003415

HCASM2007047

HCASM2007737// SEC14-LIKE PROTEIN 1.// 8.30E-09// 162aa// 24%// Q92503

HCHON2000028// Homo sapiens 7h3 protein mRNA, partial cds.// 2.1E-94// 2

28aa// 82%// AF209931

HCHON2000212

HCHON2000244

HCHON2000418

HCHON2000626// X-linked protein STS1769.// 2.00E-47// 89aa// 83%// Q9987

HCHON2001084// ARABINOSE-PROTON SYMPORTER (ARABINOSE TRANSPORTER).// 3E-66// 321aa// 36%// P09830

HCHON2001217// Homo sapiens cullin CUL4B (CUL4B) mRNA, complete cds.// 0 // 782aa// 99%// AF212995

HCHON2001548

HCHON2001577// Human elastin gene, exon 1.// 1.5E-265// 585aa// 88%// M1 7282

HCHON2001712// Neutral amino acid transporter B(0) (ATB(0)).// 0// 369aa // 85%// Q15758

HCHON2002676// ALPHA-L-IDURONIDASE PRECURSOR (EC 3.2.1.76).// 3.20E-274/ / 330aa// 99%// P35475

HCHON2003532// PHOSPHORYLASE B KINASE BETA REGULATORY CHAIN (PHOSPHORYLA SE KINASE BETA SUBUNIT).// 2.0E-159// 312aa// 95%// Q93100

HCHON2004007// Potential phospholipid-transporting ATPase IK (EC 3.6.3.1 3) (Fragment).// 1.00E-160// 273aa// 93%// 060423

HCHON2004531// UV excision repair protein RAD23 homolog B (HHR23B) (XP-C repair complementing complex 58 kDa protein) (P58).// 1.00E-142// 270aa // 66%// P54727

HCHON2004776// transmembrane protein (63kD), endoplasmic reticulum/Golgi intermediate compartment [Homo sapiens]// 0// 500aa// 86%// NP_006816 HCHON2005921// lipoma HMGIC fusion partner [Homo sapiens]// 1.00E-15// 52aa// 25%// NM 005780

HCHON2006250// Mus musculus SETA binding protein 1 (Sb1) mRNA, complete cds.// 3.9E-269// 544aa// 91%// AF246218

HCH0N2006714

HCH0N2007881

HCHON2008112// Homo sapiens HERC2 (HERC2) mRNA, complete cds.// 1.80E-24 // 79aa// 70%// AF071172

HCHON2008444// 28S ribosomal protein S15, mitochondrial precursor (MPR-S 15) (DC37).// 5.00E-39// 76aa// 76%// P82914

HEART1000010// Hepatocyte growth factor-like protein precursor (Macropha ge stimulatory protein) (MSP) (Macrophage stimulating protein).// 5.00E-18// 40aa// 93%// P26927

HEART1000074// BANP homolog; putative transcription factor; Btg3 associa ted nulcear protein [Mus musculus]// 0// 420aa// 82%// NM_016812 HEART1000088

HEART1000139// TROPONIN T, CARDIAC MUSCLE ISOFORMS (TNTC).// 1.40E-112// 221aa// 98%// P45379

HEART2001680// Ig alpha-1 chain C region.// 0// 324aa// 91%// P01876

HEART2001756

HEART2006131// 2-hydroxyphytanoyl-CoA lyase [Mus musculus]// 1.00E-138// 263aa// 45%// NM_019975

HEART2006909// Hemolysin C.// 3.00E-40// 88aa// 33%// Q54318

HEART2007031

HEART2010391

HEART2010492// GLYCEROL-3-PHOSPHATE ACYLTRANSFERASE, MITOCHONDRIAL PRECU

RSOR (EC 2.3.1.15) (GPAT) (P90).// 3.6E-47// 462aa// 32%// Q61586

HEART2010495// MICROTUBULE-ASSOCIATED PROTEIN 4.// 2.00E-159// 579aa// 6

2%// P27816

HHDPC1000118// Threonine synthase (EC 4.2.99.2).// 3.00E-70// 178aa// 35

%// Q9ZMX5

HHDPC2001337

HLUNG1000017

HLUNG2000014// Mus musculus strain BALB/c dectin-2 alpha isoform mRNA, c omplete cds.// 2.80E-55// 211aa// 50%// AF240357

HLUNG2001996

HLUNG2002465// Homo sapiens Asef mRNA for APC-stimulated guanine nucleot ide exchange factor, complete cds.// 1.30E-183// 557aa// 62%// AB042199

HLUNG2002958

HLUNG2003003

HLUNG2003872

HLUNG2010464

HLUNG2011041// basic proline-rich peptide IB-8a - human (fragments)// 9.

7E-07// 113aa// 35%// D38355

HLUNG2011298// Homo sapiens cytochrome b5 reductase 1 (B5R.1) mRNA, comp

lete cds.// 1.6E-27// 79aa// 78%// AF169481

HLUNG2012049

HLUNG2012287

HLUNG2012727

HLUNG2013204// phytoene dehydrogenase-like [Arabidopsis thaliana]// 4.0E

-53// 97aa// 55%// BAB10768

HLUNG2013304

HLUNG2013622

HLUNG2013851

HLUNG2014262

HLUNG2014288// Mus musculus RP42 mRNA, complete cds.// 2.4E-40// 189aa//

43%// AF198092

HLUNG2014449

HLUNG2015617

HLUNG2017350// GAP JUNCTION ALPHA-3 PROTEIN (CONNEXIN 44) (CX44).// 2.60

E-53// 262aa// 41%// P41987

HLUNG2017546

HLUNG2017806

HLUNG2019058

HSYRA2004858

HSYRA2005456

HSYRA2005496// ENDOGLIN PRECURSOR (CD105 ANTIGEN).// 2.4E-117// 245aa//

92%// P17813

HSYRA2006873

HSYRA2007667

HSYRA2008376

HSYRA2008714// POTENTIAL PHOSPHOLIPID-TRANSPORTING ATPASE ID (EC 3.6.1.-

) (FRAGMENT).// 6.2E-158// 412aa// 70%// P98198

HSYRA2009075

HSYRA2009102// UDP-galactose transporter related [Homo sapiens].// 3.0E-26// 280aa// 32%// NP_005818

IMR322000127// ZINC FINGER PROTEIN 135.// 3.30E-130// 426aa// 50%// P527

IMR322000917// ZINC FINGER PROTEIN 29 (ZFP-29).// 1.50E-34// 197aa// 40% // Q07230

IMR322001380// Homo sapiens leucine-rich repeats containing F-box protein FBL3 mRNA, complete cds.// 7.00E-21// 216aa// 32%// AF186273

IMR322002035

IMR322002110

IMR322003675

IMR322006222

IMR322006495// Homo sapiens mRNA for kinetochore protein CENP-H, complet e cds.// 3.1E-61// 183aa// 73%// AB035124

IMR322006886// Homo sapiens hepatocellular carcinoma-associated antigen 127 (HCA127) mRNA, complete cds.// 2.5E-107// 207aa// 99%// AF270491

IMR322016146

IMR322007225

IMR322018117

KIDNE1000064// Mus musculus mRNA for RST, complete cds.// 6.70E-219// 55 2aa// 73%// AB005451

KIDNE2000665

KIDNE2000722

KIDNE2000832

KIDNE2000846// Mus musculus orphan transporter isoform A12 (Xtrp2) mRNA, alternatively spliced, complete cds.// 1.2E-54// 203aa// 50%// AF075262 KIDNE2001361// Mus musculus catp mRNA for cation-transporting atpase, complete cds.// 4.1E-123// 273aa// 91%// AB035381

KIDNE2001847// H. sapiens graf gene.// 4.10E-98// 300aa// 55%// Y10388

KIDNE2002252// Drosophila melanogaster BcDNA.GH09358 (BcDNA.GH09358) mRN A, complete cds.// 6.30E-145// 763aa// 42%// AF181639

KIDNE2002991

KIDNE2003837

KIDNE2005543

KIDNE2006580// CYTOCHROME P450 4C1 (EC 1.14.14.1) (CYPIVC1).// 1.10E-119 // 496aa// 49%// P29981

KIDNE2010264

KIDNE2011314

KIDNE2011532// similar to melanoma-associated chondroitin sulfate proteo glycan 4// 7.00E-30// 54aa// 60%// XP_000655

KIDNE2011635// Rabbit mRNA for sodium-glucose cotransporter, complete cd s.// 2.1e-313// 670aa// 80%// D16226

KIDNE2012945// PROCOLLAGEN C-PROTEINASE ENHANCER PROTEIN PRECURSOR (PCPE
) (TYPE I PROCOLLAGEN COOH-TERMINAL PROTEINASE ENHANCER) (TYPE 1 PROCOLL
AGEN C- PROTEINASE ENHANCER PROTEIN).// 2.00E-14// 113aa// 41%// Q15113
KIDNE2013095

LIVER2007415

LYMPB1000141

LYMPB2000083// HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, ALPHA CHAIN F PRE CURSOR (HLA F ANTIGEN) (LEUKOCYTE ANTIGEN F).// 4.80E-131// 158aa// 93%// P33617

MESAN2001979

MESAN2006563

MESAN2012054

MESAN2014295

MESAN2015515

MESAN2018576

MESTC1000042

MESTC2000153

NB9N41000340

NCRRP1000129

NESOP2000744

NESOP2001433// ALC1_HUMAN Ig alpha-1 chain C region// 0// 353aa// 100%// P01876

NESOP2001656

NESOP2001694// H. sapiens graf gene. // 7.4E-53// 162aa// 66%// Y10388

NESOP2001752

NESOP2002738

NHNPC2000606

NHNPC2000877

NHNPC2001223

NHNPC2001816

NHNPC2002565

NHNPC2002749

NOVAR2000136// Calsequestrin, skeletal muscle isoform precursor (Asparta ctin) (Laminin-binding protein).// 1.00E-142// 235aa// 66%// P07221 NOVAR2000710

NOVAR2000962

NOVAR2001108// Human (hybridoma H210) anti-hepatitis A IgG variable region, constant region, complementarity-determining regions mRNA, complete cds.// 3.0E-230// 482aa// 88%// M87789

NOVAR2001783

NT2NE2003252// Human putative serine/threonine protein kinase PRK (prk) mRNA, complete cds.// 3.00E-44// 234aa// 38%// U56998

NT2NE2005890

NT2NE2006531// ZINC FINGER PROTEIN 184 (FRAGMENT).// 4.10E-113// 437aa// 47%// Q99676

NT2NE2006909// Methionine aminopeptidase 2 (EC 3.4.11.18) (MetAP 2) (Peptidase M 2) (Initiation factor 2 associated 67 kDa glycoprotein) (P67).// 1.00E-147// 258aa// 80%// P50579

NT2NE2008060

NT2RI2003993

NT2RI2004618// Cytosolic acyl coenzyme A thioester hydrolase (EC 3.1.2.2) (Long chain acyl-CoA thioester hydrolase) (CTE-II) (Brain acyl-CoA hyd rolase) (BACH).// 1.00E-126// 222aa// 88%// 000154

NT2RI2005166// VEGETATIBLE INCOMPATIBILITY PROTEIN HET-E-1.// 7.70E-14// 300aa// 26%// Q00808

NT2RI2006686// E1A-ASSOCIATED PROTEIN P300.// 1.30E-18// 421aa// 26%// Q 09472

NT2RI2008724

NT2RI2009855

NT2RI2011422// Homo sapiens partial mRNA for transport-secretion protein 2.1 (TTS-2.1 gene).// 6.4E-70// 428aa// 40%// AJ278475

NT2RI2011683

NT2RI2012659

NT2RI2012990// 76.5 KDA PROTEIN C210RF13.// 1.8E-73// 149aa// 100%// 095

447

NT2RI2013357

NT2RI2014247

NT2RI2014551

NT2RI2014733

NT2RI2016128

NT2RI2018311

NT2RI2018883

NT2RI2019751

NT2RI2023303

NT2RI2025909// carnitine/acylcarnitine translocase// 3.0E-32// 260aa// 3

7%// NP 000378

NT2RI2025957// LU1 protein [Homo sapiens]// 0// 630aa// 99%// AAF74512

NT2RI2027081

NT2RI2027396

NT2RI3000622

NT2RI3001263

NT2RI3001515// ALEX1 protein [Homo sapiens]// 2.0E-25// 220aa// 29%// NP

_057692

NT2RI3002303

NT2RI3002842

NT2RI3002892

NT2RI3003031

NT2RI3003095

NT2RI3003162

NT2RI3003382

NT2RI3003409

NT2RI3004381

NT2RI3004510

NT2RI3005202

NT2RI3005403

NT2RI3005724

NT2RI3006132

NT2RI3006171// CARCINOEMBRYONIC ANTIGEN PRECURSOR (CEA) (MECONIUM ANTIGE

N 100) (CD66E ANTIGEN).// 1.3E-54// 294aa// 39%// P06731

NT2RI3006284// Homo sapiens chorea-acanthocytosis (CHAC) mRNA, complete

cds.// 1.2E-144// 538aa// 51%// AF337532

NT2RI3006340// Myomesin 1 (Skelemin).// 0// 1390aa// 81%// Q62234

NT2RI3006376

NT2RI3006673// LAR protein precursor (Leukocyte antigen related) (EC 3.1 .3.48).// 0// 1151aa// 90%// P10586

NT2RI3006796

NT2RI3007065

NT2RI3007158

NT2RI3007291

NT2RI3007543

NT2RI3007757// breast cancer nuclear receptor-binding auxiliary protein // 1.00E-172// 295aa// 94%// AAD21311

NT2RI3007978// CTP synthase II; CTP synthetase type 2 [Homo sapiens]// 0 // 536aa// 91%// NM_019857

NT2RI3008055

NT2RI3008162

NT2RI3008652// Homo sapiens mRNA for CDEP, complete cds.// 6.10E-113//4 43aa//52%//AB008430

NT2RI3008697// erythroblast macrophage protein [Mus musculus]// 2.00E-14 // 70aa// 25%// NM_021500

NT2RI3008974// probable transposase - human transposon MER37// 1.20E-52/ / 165aa// 69%// S72481

NT2RI3009158// Iroquois-class homeodomain protein IRX-3.// 4.00E-16//52 aa// 36%//P81067

NT2RP7000359// PROTEIN-TYROSINE PHOSPHATASE D1 (EC 3.1.3.48).// 6.80E-25 // 319aa// 28%// Q16825

NT2RP7000466// Cegpl protein// 0// 482aa// 89%// NP_064436

NT2RP7004027// BONE MORPHOGENETIC PROTEIN 1 PRECURSOR (EC 3.4.24.-) (BMP -1).// 9.50E-33// 301aa// 30%// P98063

NT2RP7004123

NT2RP7005118// RAS GTPASE-ACTIVATING-LIKE PROTEIN IQGAP1 (P195) (KIAA005 1).// 0// 1034aa// 58%// P46940

NT2RP7005529// PROBABLE GUANINE NUCLEOTIDE REGULATORY PROTEIN TIM (ONCOG ENE TIM) (P60 TIM) (TRANSFORMING IMMORTALIZED MAMMARY ONCOGENE).// 5.40E -56// 364aa// 37%// Q12774

NT2RP7005846

NT2RP7009030

NT2RP7009147// CHE-2 protein [Caenorhabditis elegans]// 1.00E-177// 740a a// 41%// CAB38019

NT2RP7009867

NT2RP7010128

NT2RP7010599// Homo sapiens endothelial lipase mRNA, complete cds.// 5.6 OE-174// 321aa// 98%// AF118767

NT2RP7011570

NT2RP7013795// VEGETATIBLE INCOMPATIBILITY PROTEIN HET-E-1.// 4.90E-11// 129aa// 34%// Q00808

NT2RP7014005// CTP synthase II; CTP synthetase type 2 [Homo sapiens]// 0 // 536aa// 91%// NM_019857

NT2RP7015512

NT2RP7017365

NT2RP7017474

NT2RP7017546

NT2RP8000137

NT2RP8000296// similar to Kelch proteins// 0// 600aa// 99%// AAF03529 NT2RP8000483// Rattus norvegicus mRNA for Nadrin E2, complete cds.// 2.0

0E-208// 548aa// 75%// AB060557

NTONG2000413// MATRIX METALLOPROTEINASE-16 PRECURSOR (EC 3.4.24.-) (MMP-

16) (MEMBRANE-TYPE MATRIX METALLOPROTEINASE 3) (MT-MMP 3) (MTMMP3) (MMP-

X2).// 5.60E-62// 290aa// 37%// P51512

NTONG2003852

NTONG2005277// ANKYRIN 1 (ERYTHROCYTE ANKYRIN).// 8.20E-31// 363aa// 31%

// Q02357

NTONG2005969

NTONG2006354

NTONG2007249

NTONG2007517// RING CANAL PROTEIN (KELCH PROTEIN).// 9.10E-32// 295aa//

28%// Q04652

NTONG2008088

NTONG2008672// final exon in repeat region; similar to long tandem repeat region of sialidase (SP:TCNA_TRYCR, P23253) and neurofilament H protein $\frac{1.9E-15}{559aa}$ AAC48204

0CBBF1000254

0CBBF2001794

OCBBF2002124// p40 [Homo sapiens]// 3.00E-63// 103aa// 88%// AAC51270

OCBBF2003819

OCBBF2004826// T-cell lymphoma invasion and metastasis 2 [Homo sapiens]/ / 0// 580aa// 99%// NP_036586

OCBBF2004883

0CBBF2005428

OCBBF2006005// Bos taurus phosphatidic acid-preferring phospholipase Al mRNA, complete cds.// O// 885aa// 90%// AF045022

OCBBF2006058// Homo sapiens acyl-Coenzyme A dehydrogenase-8 precursor, m RNA, complete cds.// 5.40E-57// 109aa// 100%// AF126245

OCBBF2006151// Mus musculus protein tyrosine phosphatase-like protein PT PLB (Ptplb) mRNA, complete cds.// 3.40E-126// 258aa// 93%// AF169286 OCBBF2006567

OCBBF2006764// seizure related gene 6 [Mus musculus]// 0// 780aa// 89%// NP_067261

OCBBF2007028// Homo sapiens mRNA for NESCA, complete cds.// 1.50E-169// 176aa// 98%// AB026894

OCBBF2007068// ankyrin 1 [Bos taurus].// 1.00E-68// 800aa// 32%// AAF617

OCBBF2007114

0CBBF2007428

0CBBF2007478

OCBBF2007610// PSD-95/SAP90-associated protein-4 [Rattus norvegicus].//

1.00E-137// 226aa// 90%// AAB48590

OCBBF2008770

0CBBF2009788

0CBBF2009926

0CBBF2010140

0CBBF2010416

0CBBF2017516

OCBBF2019327

OCBBF2019823// lactate dehydrogenase A -like [Homo sapiens]// 1.00E-164// 273aa// 82%// NM_033195

OCBBF2020343

OCBBF2020453

0CBBF2020639

OCBBF2020741

OCBBF2020801// Ataxin 7 (Spinocerebellar ataxia type 7 protein).// 5.00E -67// 116aa// 100%// 015265

OCBBF2020838// FORKHEAD BOX PROTEIN D4 (FORKHEAD-RELATED PROTEIN FKHL9)

(FORKHEAD- RELATED TRANSCRIPTION FACTOR 5) (FREAC-5) (TRANSCRIPTION FACT

OR FKH- 2).// 1.70E-114// 371aa// 63%// Q60688

OCBBF2021020// Homo sapiens mRNA for vascular Rab-GAP/TBC-containing protein, complete cds.// 1.8E-24// 107aa// 47%// AB024057

OCBBF2021286

OCBBF2021323// Mus musculus GTRGE022 (Gtrgeo22) mRNA, complete cds.// 7.

```
80E-49// 115aa// 88%// AF303106
```

OCBBF2021788// Homo sapiens mRNA for B-cell CLL/lymphoma 9 (BCL9 gene)./

/ 1.30E-92// 600aa// 42%// Y13620

OCBBF2022351// TIPD PROTEIN.// 1.1E-54// 263aa// 40%// 015736

OCBBF2022574

0CBBF2023162

0CBBF2023643

OCBBF2024719

0CBBF2024781

0CBBF2024850

0CBBF2025028

0CBBF2025458

OCBBF2025527// GLYCEROL-3-PHOSPHATE DEHYDROGENASE [NAD+], CYTOPLASMIC (E

C 1.1.1.8) (GPD-C) (GPDH-C).// 8.60E-49// 116aa// 78%// P13707

0CBBF2025730

0CBBF2026645

0CBBF2027423

0CBBF2027478

OCBBF2028173// JM11 protein [Homo sapiens]// 1.00E-131// 304aa// 97%// A

AF05832

0CBBF2028935

0CBBF2029901

OCBBF2030354// Mus musculus pantothenate kinase 1 beta (panKlbeta) mRNA,

complete cds.// 9.50E-195// 372aa// 96%// AF200357

0CBBF2030517

0CBBF2030574

0CBBF2030708

OCBBF2031167// Homo sapiens mRNA for MDC2 alpha, MDC2 beta, complete cds .// O// 813aa// 99%// AB009671

```
0CBBF2031366
```

OCBBF2032590// H. sapiens mRNA for melanoma-associated chondroitin sulfat e proteoglycan (MCSP).// 1.80E-11// 151aa// 39%// X96753

OCBBF2032599

0CBBF2032611

OCBBF2032671

OCBBF2033869// PROCOLLAGEN C-PROTEINASE ENHANCER PROTEIN PRECURSOR (PCPE
) (TYPE I PROCOLLAGEN COOH-TERMINAL PROTEINASE ENHANCER) (TYPE 1 PROCOLL
AGEN C- PROTEINASE ENHANCER PROTEIN).// 6.6E-21// 151aa// 38%// Q15113

OCBBF2035110

0CBBF2035214

0CBBF2035564

OCBBF2035885

OCBBF2035916

OCBBF2036476

OCBBF2036743// ZINC FINGER PROTEIN 133.// 9.00E-157// 639aa// 48%// P527 36

OCBBF2037068// BCL2/adenovirus E1B 19-kDa protein-interacting protein 2. // 3.00E-74// 122aa// 66%// 054940

OCBBF2037340// Sacsin.// O// 356aa// 100%// Q9NZJ4

OCBBF2037398

OCBBF2037547// T-cell lymphoma invasion and metastasis 2 [Homo sapiens]/ $^{\prime}$ / $^{\prime}$ 1024aa// 92%// NM_012454

OCBBF2037598// axonal-associated cell adhesion molecule [Mus musculus]// O// 366aa// 89%// NP_031544

OCBBF2037638

OCBBF2038317// VPS10 domain receptor protein SORCS [Mus musculus]// 0//

986aa// 91%// NM_021377

OCBBF3000296

OCBBF3000483

0CBBF3002553

0CBBF3002600

OCBBF3003320// Potential phospholipid-transporting ATPase IS (EC 3.6.3.1

3) (Fragment).// 1.00E-110// 179aa// 62%// P98196

OCBBF3003592// Dynein beta chain, flagellar outer arm.// 2.00E-54// 222a

a// 21%// Q39565

OCBBF3004314// Fas apoptotic inhibitory molecule [Mus musculus]// 8.00E-

67// 117aa// 90%// NM_011810

OCBBF3006802

OCBBF3007516

0CBBF3008230

OCBBF3009279

PEBLM2000170// Sprouty homolog 3 (Spry-3).// 1.00E-31// 64aa// 100%// 04

3610

PEBLM2000338

PEBLM2001465// diphthamide biosynthesis; Dph5p [Saccharomyces cerevisiae

]// 9.00E-65// 160aa// 57%// NP_013273

PEBLM2001488

PEBLM2002594// ATP-binding cassette, sub-family A member 8 [Homo sapiens

]// 4.50E-156// 469aa// 64%// XP_016390

PEBLM2002749

PEBLM2002887// ZINC FINGER PROTEIN 195.// 1.50E-08// 62aa// 58%// 014628

PEBLM2004497

PEBLM2004666

PEBLM2005183// 5'-3' exonuclease // 0// 804aa// 92%// CAA62819

PEBLM2005697

PEBLM2006113

PEBLM2007112

PEBLM2007140

PEBLM2007834

PERIC1000147

PERIC2000889// Rattus norvegicus dynamin-like protein variant 4 mRNA, al ternatively spliced, partial cds.// 3.1E-22// 51aa// 98%// AF107048

PERIC2000914

PERIC2001227

PERIC2001228

PERIC2002766

PERIC2003090

PERIC2003452

PERIC2003699

PERIC2003720// kinectin 1; CG-1 antigen [Homo sapiens].// 2.00E-92// 270 aa// 90%// NP_004977

PERIC2003834

PERIC2004028// Mus musculus erythroblast macrophage protein EMP mRNA, complete cds.// 3.80E-33// 65aa// 100%// AF263247

PERIC2004259

PERIC2004379

PERIC2004429

PERIC2004909

PERIC2005347// alpha 1C adrenergic receptor isoform 2// 3.30E-22// 74aa// 70%// BAA06901

PERIC2005370

PERIC2006035

PERIC2007914// Ubiquitously transcribed TPR gene on Y chromosome [Homo s apiens]// 1.0E-22// 84aa// 67%// NP_009056

PERIC2008385// sarcosine dehydrogenase; dimethylglycine dehydrogenase-li ke 1 [Homo sapiens]// 4.00E-17// 47aa// 51%// NM_007101

PERIC2009086// Homo sapiens melanoma-associated antigen MG50 mRNA, partial cds.// 5.00E-189// 508aa// 66%// AF200348

PLACE5000001

PLACE5000171// E-SELECTIN PRECURSOR (ENDOTHELIAL LEUKOCYTE ADHESION MOLE CULE 1) (ELAM-1) (LEUKOCYTE-ENDOTHELIAL CELL ADHESION MOLECULE 2) (LECAM 2) (CD62E).// 1.50E-28// 242aa// 30%// P98110

PLACE5000260

PLACE5000282// elastin [Homo sapiens]// 8.00E-08// 420aa// 97%// NP_0004 92

PLACE6001185

PLACE6009006

PLACE6012574

PLACE6019385// MITOGEN-ACTIVATED PROTEIN KINASE KINASE KINASE 5 (EC 2.7.

1.-) (MAPK/ERK KINASE KINASE 5) (MEK KINASE 5) (MEKK 5) (APOPTOSIS SIGNA

L- REGULATING KINASE 1) (ASK-1).// 2E-57// 92aa// 63%// Q99683

PLACE6019932// Ictalurus punctatus NCC receptor protein 1 (NCCRP-1) mRNA , complete cds.// 1.2E-34// 124aa// 50%// AF208795

PLACE6020031// ANKYRIN HOMOLOG PRECURSOR.// 2.70E-06// 156aa// 35%// Q06 527

PLACE7000514// Mus musculus mRNA for ER protein 58 (EP58 gene).// 3.80E-111// 366aa// 55%// AJ404004

PLACE7001022

PLACE7001936

PLACE7002641// Ring assembly protein 3.// 2.00E-13// 79aa// 26%// 074994 PLACE7006051// cytoplasmic dynein heavy chain 2 [Rattus norvegicus]// 0/ 987aa// 90%// NM_023024

PLACE7008431// Phosphatidylinositol-4-phosphate 5-kinase type II alpha (EC 2.7.1.68) (PIP5KII-alpha) (1-phosphatidylinositol-4-phosphate kinase) (PtdIns(4)P-5-kinase B isoform) (Diphosphoinositide kinase).// 1.00E-10

9// 200aa// 56%// 070172

PLACE7008623

PROST1000184// VASOACTIVE INTESTINAL POLYPEPTIDE RECEPTOR 1 PRECURSOR (V IP-R-1) (PITUITARY ADENYLATE CYCLASE ACTIVATING POLYPEPTIDE TYPE II RECEPTOR) (PACAP TYPE II RECEPTOR) (PACAP-R-2).// 7.0E-63// 125aa// 98%// P3 2241

PROST1000528

PROST1000559// predicted osteoblast protein [Homo sapiens]// $6.00E-33//227aa//38\%//NP_055703$

PROST2003428// Protein pM5 precursor.// 9.00E-47// 91aa// 89%// Q15155
PROST2008993// Mus musculus Pax transcription activation domain interact ing protein PTIP mRNA, complete cds.// 1.10E-211// 542aa// 77%// AF10426

PROST2015243

PROST2016462// N-chimaerin (NC) (N-chimerin) (Alpha chimerin) (A-chimaerin).// 6.00E-26// 65aa// 34%// P30337

PROST2017367// PROTEIN-GLUTAMINE GLUTAMYLTRANSFERASE 4 (EC 2.3.2.13) (PR OSTATE TRANSGLUTAMINASE) (PROSTATE TRANSGLUTAMINASE) (TGP).// 1.30E-52// 102aa// 99%// P49221

PROST2017413

PROST2017700

PROST2018030

PROST2018090// SUSHI REPEAT-CONTAINING PROTEIN SRPX PRECURSOR.// 9.50E-2 44// 414aa// 99%// P78539

PROST2018511// Growth factor receptor-bound protein 7 (GRB7 adapter protein) (Epidermal growth factor receptor GRB-7) (B47).// 0// 495aa// 99%// Q14451

PROST2018902

PROST2018922

PROST2019296

PROST2019781

PUAEN2002489// Homo sapiens putative seven pass transmembrane protein (T

M7SF1) mRNA, complete cds.// 1.0E-48// 189aa// 53%// AF027826

PUAEN2002616

PUAEN2003079// nasopharyngeal carcinoma susceptibility protein [Homo sapiens]// 3.00E-36// 75aa// 96%// NP_037407

PUAEN2005588

PUAEN2005930

PUAEN2006328// vascular Rab-GAP/TBC-containing [Homo sapiens]// 8.0E-99// 360aa// 53%// NP_008994

PUAEN2006701

PUAEN2007044// TRNA PSEUDOURIDINE SYNTHASE B (EC 4.2.1.70) (TRNA PSEUDOU

RIDINE 55 SYNTHASE) (PSI55 SYNTHASE) (PSEUDOURIDYLATE SYNTHASE) (URACIL

HYDROLYASE).// 7.90E-15// 129aa// 34%// P45142

PUAEN2007785

PUAEN2009174

PUAEN2009655// Bos taurus phosphatidic acid-preferring phospholipase Al mRNA, complete cds.// 0// 565aa// 96%// AF045022

PUAEN2009795// Endothelial cell multimerin precursor.// 1.00E-161// 296a a// 78%// Q13201

PUAEN2009852// serine/threonine protein kinase Kp78 splice variant CTAK7 5a // 3.00E-33// 86aa// 36%// AAD48007

RECTM2000433// ZG-16p [Rattus norvegicus] // 1.60E-64// 148aa// 85%// CA A83059

RECTM2001347// sphingosine kinase type 2 isoform [Homo sapiens]// 4.00E-46// 87aa// 80%// NM_020126

SKMUS2000757

SKMUS2003074

SKMUS2004047

SKMUS2006394// Mus musculus ankyrin repeat-containing protein Asb-4 mRNA

, partial cds.// 6.40E-54// 405aa// 34%// AF155355

SKNMC1000124// putative nuclear protein [Homo sapiens].// 3.00E-12// 398

aa// 37%// NP_057689

SKNMC2002402

SKNMC2004457

SKNMC2004643

SKNMC2005772

SKNMC2006998// PROTEIN PHOSPHATASE INHIBITOR 1 (IPP-1) (I-1).// 9.9E-32/ / 113aa// 64%// Q13522

SKNMC2007504// DNA-directed RNA polymerase II largest subunit (EC 2.7.7.

6) (RPB1).// 1.00E-16// 76aa// 26%// P08775

SKNMC2007961

SKNMC2009450

SKNSH2000482

SKNSH2009991

SKNSH2010015

SMINT1000192// PUTATIVE ATP-DEPENDENT RNA HELICASE KIAA0134.// 4.00E-12/

/ 37aa// 100%// Q14147

SMINT2001818

SMINT2002743

SMINT2006641

SMINT2007391

SMINT2009902

SMINT2010076// Ig alpha-l chain C region.// 0// 319aa// 91%// P01876

SMINT2010897

SMINT2011311

SMINT2011888// protein Tro alphal H, myeloma// 8.9E-215// 481aa// 82%// 0

501254A

SMINT2015787// immunoglobulin lambda light chain [Homo sapiens]// 1.40E-60// 164aa// 77%// CAA40954

SPLEN2001599// Homo sapiens sialic acid binding immunoglobulin-like lect in 8 long splice variant (Siglec8) gene, complete cds.// 4.00E-71// 294a a// 38%// AF287892

SPLEN2002147// Halocynthia roretzi mRNA for HrPET-3, complete cds.// 1.2 0E-09// 78aa// 41%// AB029335

SPLEN2002467// Homo sapiens leucine-rich repeats containing F-box protein FBL3 mRNA, complete cds.// 1.60E-187// 422aa// 77%// AF186273

SPLEN2006122// Homo sapiens RNA-binding region (RNP1, RRM) containing 2 (RNPC2)// 2.00E-81// 147aa// 84%// NM_004902

SPLEN2009548

SPLEN2002707

SPLEN2010912// putative nucleolar RNA helicase [Homo sapiens]// 0// 339a a// 90%// NM_019082

SPLEN2011422// CALDESMON (CDM).// 5.3E-12// 165aa// 37%// Q05682

SPLEN2012624// BRCA1-associated RING domain protein 1 (BARD-1).// 6.00E-14//48aa//39%//Q9QZH2

SPLEN2012889// putative Na+-dependent inorganic phosphate cotransporter/
/ 9.00E-19// 70aa// 32%// AAC35230

SPLEN2014946

SPLEN2015158

SPLEN2015267// Homo sapiens IGHG3 gene for immunoglobulin heavy chain ga mma 3 constant region, 4-exon hinge, isolate Lib-A2.// 1.0E-213// 377aa// 100%// AJ390247

SPLEN2015679// Oryctolagus cuniculus sarcolemmal associated protein-3 mR NA, complete cds.// 4.90E-30// 266aa// 31%// U21157

SPLEN2016554

SPLEN2016863

SPLEN2017104

SPLEN2021701// HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-2 ALPHA CHAIN P

RECURSOR. // 4.40E-128// 173aa// 86%// P01892

SPLEN2023733

SPLEN2023791

SPLEN2024127

SPLEN2025491

SPLEN2027268

SPLEN2028844

SPLEN2028914

SPLEN2029051

SPLEN2029176

SPLEN2029522

SPLEN2029683

SPLEN2029727

SPLEN2029912

SPLEN2030335// Mus musculus fatty acid transport protein 3 mRNA, partial cds// 9.7E-251// 275aa// 81%// AF072758

SPLEN2030479

SPLEN2031125

SPLEN2031424

SPLEN2031547// Triose phosphate/phosphate translocator, non-green plastid precursor (CTPT).// 4.00E-20// 76aa// 25%// P52178

SPLEN2031724

SPLEN2031780

SPLEN2032154// NDRG1 PROTEIN (DIFFERENTIATION-RELATED GENE 1 PROTEIN) (D RG1) (REDUCING AGENTS AND TUNICAMYCIN-RESPONSIVE PROTEIN) (RTP) (NICKEL-SPECIFIC INDUCTION PROTEIN CAP43).// 1.0E-22// 80aa// 57%// Q92597

SPLEN2032321

SPLEN2032813

SPLEN2033098// tumor necrosis factor receptor superfamily, member 14// 1 .7E-99// $183aa// 100\%// NP_003811$

SPLEN2033153

SPLEN2033539

SPLEN2033921

SPLEN2034021

SPLEN2034081

SPLEN2034678

SPLEN2034781

SPLEN2036103

SPLEN2036326// CLAUDIN-5 (TRANSMEMBRANE PROTEIN DELETED IN VCFS) (TMDVCF).// 2.6E-118// 218aa// 100%// 000501

SPLEN2036712

SPLEN2036821// MITOCHONDRIAL CARNITINE/ACYLCARNITINE CARRIER PROTEIN (CARNITINE/ACYLCARNITINE TRANSLOCASE) (CAC).// 6.5E-10// 104aa// 33%// 0437

SPLEN2036932// Homo sapiens calcium and DAG-regulated guanine nucleotide exchange factor I mRNA, complete cds.// 3.9E-63// 124aa// 100%// AF0811 94

SPLEN2037194// NORQ PROTEIN.// 5.5E-11// 127aa// 38%// Q51664

SPLEN2037580

SPLEN2037630

SPLEN2037722// lymphocyte antigen 108 [Mus musculus]// 3.00E-63// 137aa// 42%// NM_030710

SPLEN2038055

SPLEN2038180

SPLEN2038345

SPLEN2038407// basement membrane-induced gene // 2.1E-33// 283aa// 34%//

XP_001646

SPLEN2039697

SPLEN2039936

SPLEN2040222

SPLEN2041304

SPLEN2041310

SPLEN2041645

SPLEN2041720

SPLEN2041977

SPLEN2042303

SPLEN2042598

STOMA1000189

STOMA2003444

STOMA2004294// Ig lambda chain V-IV region Bau.// 1.00E-41// 79aa// 73%/ P01715

STOMA2004925

STOMA2008546// CDM PROTEIN (6C6-AG TUMOR-ASSOCIATED ANTIGEN) (DXS1357E).

// 5.00E-124// 246aa// 100%// P51572

SYN0V1000374

SYNOV2005216// Homo sapiens laryngeal carcinoma related protein 1 mRNA, complete cds.// 2.5E-36// 70aa// 98%// AF268387

SYN0V2005448

SYNOV2005817// CYTOKINE RECEPTOR CLASS-II CRF2-4 PRECURSOR.// 7.6E-176// 314aa// 98%// Q08334

SYN0V2006430

SYNOV2007965// Homo sapiens mRNA for H-1(3)mbt-like protein, alternative variant a.// 3.1E-118// 429aa// 54%// AJ305226

SYNOV2012326// PUTATIVE PROTEIN-TYROSINE PHOSPHATASE TPTE (EC 3.1.3.48).

```
// 6.7E-24// 112aa// 58%// P56180
SYNOV2014400// FIBULIN-1, ISOFORM C PRECURSOR.// 4.0E-31// 198aa// 37%//
P23144
SYN0V2016124
SYN0V2017055
SYN0V2018921
SYNOV2021320// SH3 DOMAIN-BINDING PROTEIN 3BP-2.// 2.3E-238// 429aa// 98
%// P78314
SYNOV3000231// Ig gamma-1 chain C region.// 0// 315aa// 95%// P01857
SYNOV3000302// Ig gamma-1 chain C region.// 1.00E-173// 294aa// 89%// PO
1857
SYN0V4000472
SYNOV4000706// B cell phosphoinositide 3-kinase adaptor [Mus musculus]//
0// 633aa// 79%// NM_031376
SYN0V4001326
SYN0V4001395
SYN0V4002346
SYN0V4002392
SYNOV4002883// S-adenosylmethionine decarboxylase proenzyme (EC 4.1.1.50
) (AdoMetDC) (SamDC) [Contains: S-adenosylmethionine decarboxylase alpha
chain; S- adenosylmethionine decarboxylase beta chain].// 4.00E-72// 12
9aa// 99%// P17707
SYN0V4003322
SYN0V4004184
SYNOV4004741// BENE protein (Fragment).// 2.00E-77// 140aa// 94%// Q1302
1
SYN0V4004823
SYN0V4004914
```

SYN0V4006256

SYN0V4007012

SYN0V4007215

SYNOV4007360// SSXT protein (SYT protein).// 5.00E-24// 70aa// 36%// Q62

280

SYN0V4007430

SYNOV4007521// fibroblast growth factor receptor-like 1 precursor [Homo

sapiens]// 7.00E-11// 53aa// 29%// NM_021923

SYNOV4007553// toll-like receptor2 [Homo sapiens]// 0// 740aa// 94%// NM

_003264

SYNOV4007671// Syntaxin 3.// 1.00E-144// 262aa// 99%// Q13277

SYN0V4008336

SYNOV4008440// Protein BAP28.// 0// 1119aa// 85%// Q9H583

T1ESE2000116

TBAES2001171

TBAES2001220

TBAES2001229// 60S ribosomal protein L23a.// 8.00E-48// 92aa// 82%// P29

316

TBAES2001258// SERINE PROTEASE HEPSIN (EC 3.4.21.-) (TRANSMEMBRANE PROTE

ASE, SERINE 1).// 6.40E-19// 55aa// 87%// P05981

TBAES2001492

TBAES2001751

TBAES2002197

TBAES2003550

TBAES2004055// NY-REN-50 antigen// 1.00E-155// 290aa// 99%// AAD42878.

TBAES2005157

TBAES2005543

TBAES2006568

TBAES2007964

TCERX2000613

TCOLN2002278

TESOP1000127

TESOP2000801// PROTO-ONCOGENE TYROSINE-PROTEIN KINASE YES (EC 2.7.1.112)

(P61-YES) (C-YES).// 3.9E-46// 159aa// 57%// Q04736

TESOP2001122// Caenorhabditis elegans LIN-9S (lin-9) mRNA, complete cds.

// 5.60E-25// 222aa// 28%// AF269694

TESOP2001166// Mus musculus SOCS-5 mRNA, complete cds.// 1.2E-114// 439a

a// 53%// AF033187

TESOP2001345

TESOP2001605// Homo sapiens laryngeal carcinoma related protein 1 mRNA,

complete cds.// 2.5E-36// 70aa// 98%// AF268387

TESOP2001818

TESOP2001849

TESOP2001865

TESOP2001953// ooplasm [Mus musculus]// 7.00E-08// 58aa// 26%// NM_01186

0

TESOP2002273

TESOP2002451

TESOP2002489

TESOP2002539

TESOP2002950

TESOP2003273

TESOP2003753

TESOP2004114// PROCOLLAGEN-LYSINE, 2-OXOGLUTARATE 5-DIOXYGENASE 2 PRECURS

OR (EC 1.14.11.4) (LYSYL HYDROXYLASE 2) (LH2).// 1.70E-202// 237aa// 99%

// 000469

TESOP2005285// Homo sapiens partial mRNA for chr2 synaptotagmin (CHR2SYT

gene).// 1.1E-21// 54aa// 96%// AJ303365

TESOP2005485// Ig delta chain C region.// 2.00E-77// 136aa// 100%// P018

80

TESOP2005579

TESOP2006041

TESOP2006060

TESOP2006068

TESOP2006670

TESOP2006746

TESOP2007052

TESOP2007262

TESOP2007636

TESOP2007688

TESOP2009121// Homo sapiens centromere protein E (312kD) (CENPE), mRNA// 2.00E-10// 155aa// 20%// NM_001813

TESOP2009555

TESTI1000257// GLUCOSE TRANSPORTER TYPE 3, BRAIN.// 7.4E-249// 493aa// 9

5%// P11169

TESTI1000319// Putative eukaryotic translation initiation factor 3 subunit (eIF-3) (Fragment).// 0// 683aa// 97%// 075153

TESTI1000330

TESTI1000348

TESTI1000390

TESTI1000491

TESTI1000545// Ring assembly protein 3.// 2.00E-14// 92aa// 26%// 074994
TESTI2000443

TESTI2000644// SMALL INDUCIBLE CYTOKINE A14 PRECURSOR (CHEMOKINE CC-1/CC -3) (HCC- 1/HCC-3) (NCC-2).// 2.80E-36// 69aa// 98%// Q16627

TESTI2002036// DIHYDROPYRIDINE-SENSITIVE L-TYPE, SKELETAL MUSCLE CALCIUM CHANNEL ALPHA-1 SUBUNIT.// 1.70E-18// 398aa// 24%// P22316

TESTI2002618// ADAM 2 PRECURSOR (A DISINTEGRIN AND METALLOPROTEINASE DOM

AIN 2) (FERTILIN BETA SUBUNIT) (PH-30) (PH30).// 1.10E-57// 253aa// 47%// Q99965

TESTI2002928

TESTI2003347// Homo sapiens connexin 59 (CX59) gene, complete cds.// 1.8 0E-243// 440aa// 100%// AF179597

TESTI2003573// Mus musculus cell cycle checkpoint control protein Mrad9 gene, complete cds.// 2.4E-38// 325aa// 30%// AF045662

TESTI2004215// Maackia amurensis early nodulin (ENOD2) mRNA, partial cds .// 1.3E-34// 390aa// 31%// AF039708

TESTI2004700

TESTI2005376

TESTI2005610// H. sapiens encoding CLA-1 mRNA.// 5.9E-234// 425aa// 99%// Z22555

TESTI2005739// Drosophila melanogaster Rho-kinase (Rhk) mRNA, complete c ds.// 1.7E-09// 383aa// 24%// AF151375

TESTI2005986

TESTI2006041

TESTI2006643

TESTI2006648// ATP-binding cassette, sub-family C, member 5a// 9E-109//

TESTI2009474

452aa// 39%// NP_038818

TESTI2009477// TRICHOHYALIN.// 1.9E-18// 124aa// 39%// P37709

TESTI2009511

TESTI2009812

TESTI2010400

TESTI2013381

TESTI2013382

TESTI2014716// G-RICH SEQUENCE FACTOR-1 (GRSF-1).// 2.6E-228// 391aa// 9 9%// Q12849

TESTI2014843

TESTI2016046// Homo sapiens HOTTL protein mRNA, complete cds.// 2.8E-20/ / 242aa// 26%// AF078842

TESTI2017727

TEST12018838

TESTI2019042

TESTI2019648

TESTI2023254

TESTI2023599

TESTI2024567// METABOTROPIC GLUTAMATE RECEPTOR 8 PRECURSOR. // 1.10E-130/ / 243aa// 99%// 000222

TESTI2026505// PUTATIVE RHO/RAC GUANINE NUCLEOTIDE EXCHANGE FACTOR (RHO/RAC GEF) (FACIOGENITAL DYSPLASIA PROTEIN).// 1.40E-50// 378aa// 29%// P9 8174

TESTI2027019// Homo sapiens leucine-rich repeat-containing G protein-coupled receptor 6 (LGR6) mRNA, partial cds.// 4.80E-125// 137aa// 100%// A F190501

TESTI2031529

TESTI2034520// Rattus norvegicus SMC (segregation of mitotic chromosomes 1)-like 1 (yeast) (Smc111), mRNA// 1.00E-145// 250aa// 53%// NM_031683 TESTI2034749

TESTI2034767// Homo sapiens collagen type IX alpha 1 chain (COL9A1) gene , long and short alternatively spliced forms, exon 38 and complete cds./ / 1.40E-191// 484aa// 73%// AF036130

TESTI2034953// Homo sapiens 88-kDa Golgi protein (GM88) mRNA, complete c ds.// 2.00E-27// 91aa// 64%// AF204231

TESTI2034997

TESTI2035107

TESTI2036513

TESTI2036684

TESTI2037643

TESTI2040018// Homo sapiens ZNF258 (ZNF258) mRNA, complete cds.// 7.80E-

97// 461aa// 49%// AF055470

TESTI2042450

TESTI2044796// ring finger protein 3 [Homo sapiens]// 9.00E-41// 92aa//

38%// NM_006315

TESTI2044833

TESTI2045920

TESTI2045983

TESTI2046347

TESTI2047071

TESTI2048465

TESTI2048603

TESTI2048898

TESTI2049206

TESTI2049246

TESTI2049277

TESTI2049422

TESTI2049452

TESTI2049469

TESTI2049576

TESTI2049857// golgi stacking protein homolog GRASP55 [Rattus norvegicus

]// 5.00E-163// 410aa// 89%// AAD55350

TESTI2050137// SHC transforming protein.// 1.00E-113// 232aa// 54%// P98

083

TESTI2050681

TESTI2050987// RET finger protein-like 1.// 4.00E-35// 94aa// 34%// 0756

77

TESTI2051279

TESTI2051488

TESTI2051543

TESTI2051767

TESTI2051806

TESTI2051867// 60S ribosomal protein L4 (L1).// 1.00E-126// 222aa// 86%// P36578

TESTI2052211

TESTI2052693// brk kinase substrate [Homo sapiens].// 0// 341aa// 87%//

CAB65105

TESTI2052698

TESTI2052822

TESTI2053242

TESTI2053399// Homo sapiens pescadillo homolog 1, containing BRCT domain (zebrafish) (PES1), mRNA// 9.00E-33// 63aa// 100%// NM_014303

TESTI2053526

TESTI2053621// Guanylyl cyclase activating protein 1 (GCAP 1) (Guanylate cyclase activator 1A).// 7.00E-96// 170aa// 92%// P43080

TESTI4000014// 130 kDa leucine-rich protein (LRP 130) (GP130).// 0// 121 0aa// 96%// P42704

TESTI4000068

TESTI4000079// nuclear dual-specificity phosphatase [Homo sapiens]// 6.0 0E-07// 80aa// 36%// AAC39675

TESTI4000209// Homo sapiens F-BOX domain protein mRNA, complete cds.// 5 .5E-103// 194aa// 99%// AF248640

TESTI4000215

TESTI4000250

TESTI4000288// Dynamin-1 (EC 3.6.1.50) (D100) (Dynamin, brain) (B-dynami

n).// 2.00E-13// 38aa// 77%// P21575

TESTI4000349// thyroid hormone receptor interactor 12// 1.00E-39// 180aa // 40%// NP_004229

TESTI4000462

TESTI4000530

TESTI4000724// solute carrier family 16 (monocarboxylic acid transporter s)// 5.00E-47// 490aa// 28%// NP_004687

TESTI4000970

TESTI4001100// protein tyrosine phosphatase, receptor type, f polypeptid e (PTPRF), interacting protein (liprin), alpha 1 [Homo sapiens]// $3.00E-21//50aa//40\%//NM_003626$

TESTI4001106// ubiquitin-protein ligase e3 componen n-recognin [Mus musc · ulus]// 1.00E-124// 228aa// 45%// NM_009461

TESTI4001148// Dynein beta chain, ciliary.// 1.00E-152// 282aa// 45%// P 39057

TESTI4001176// Regulator of nonsense transcripts 1 (Nonsense mRNA reducing factor 1) (NORF1) (Up-frameshift suppressor 1 homolog).// 3.00E-46//90aa//92%//Q92900

TESTI4001201

TESTI4001206

TESTI4001527// UDP-glucuronosyltransferase 2Cl microsomal (EC 2.4.1.17) (UDPGT) (Fragment).// 9.00E-24// 64aa// 36%// P36514

TESTI4001561// 1-acyl-sn-glycerol-3-phosphate acyltransferase gamma (EC 2.3.1.51) (1- AGP acyltransferase 3) (1-AGPAT 3) (Lysophosphatidic acid acyltransferase-gamma) (LPAAT-gamma) (1-acylglycerol-3-phosphate 0- acyltransferase 3).// 0// 319aa// 93%// Q9NRZ7

TESTI4001665

TESTI4001923

TEST14002290

TESTI4002491// Beta-soluble NSF attachment protein (SNAP-beta) (N-ethylm aleimide- sensitive factor attachment protein, beta) (Brain protein I47) (Fragment).// 1.00E-52// 99aa// 93%// P28663

TESTI4002552// Sodium/potassium-transporting ATPase alpha-4 chain (EC 3. 6.3.9) (Sodium pump 4) (Na+/K+ ATPase 4) (Fragment).// 0// 505aa// 94%// Q13733

TESTI4002647

TESTI4002703

TESTI4002754

TESTI4002878

TESTI4004200

TESTI4005628

TESTI4005805

TESTI4005857

TESTI4005961

TESTI4006053

TESTI4006079// MUF1 protein; likely ortholog of mouse MUF1; elongin BC-i nteracting leucine-rich repeat protein [Homo sapiens]// 0// 365aa// 80%// NM_006369

TESTI4006112

TESTI4006137

TESTI4006148// putative NADH oxidoreductase complex I subunit// 2.00E-18 // 40aa// 56%// AAD37863.

TESTI4006219

TESTI4006326

TESTI4006393// neural specific sr protein NSSR 2 [Mus musculus]// 7.00E-19//70aa//80%//BAA35093

TESTI4006412

TESTI4006420// SH3-domain binding protein 5 (BTK-associated); SH3 bindin

g protein [Homo sapiens]// 8.00E-25// 61aa// 41%// NM_004844

TESTI4006546// colon cancer antigen NY-CO-45 [Homo sapiens].// 0// 723aa // 99%// AAC18034

TESTI4006802// mesothelin; megakaryocyte potentiating factor [Mus muscul us]// 2.00E-06// 92aa// 23%// NM_018857

TESTI4006819// Alpha enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydrolyase) (NON- neural enolase) (NNE) (Phosphopyruvate hydratase).// 1.00E-33// 72aa// 66%// P06733

TESTI4007064

TESTI4007163// Sodium- and chloride-dependent creatine transporter 2 (CT 2) (Fragment).// 2.00E-92// 153aa// 84%// P53796

TESTI4007203

TESTI4007239

TESTI4007373

TESTI4007382

TESTI4007404

TESTI4007489

TESTI4007775

TESTI4007778// Alpha-actinin 3 (Alpha actinin skeletal muscle isoform 3) (F-actin cross linking protein).// 0// 853aa// 94%// Q08043

TESTI4007799

TESTI4007810// DNA ligase III (EC 6.5.1.1) (Polydeoxyribonucleotide synt hase [ATP]).// 1.00E-112// 197aa// 86%// P49916

TESTI4008007

TESTI4008018// DAZ associated protein 2; KIAA0058 gene product [Homo sapiens]// 6.00E-41// 82aa// 75%// NM_014764

TESTI4008050// Translocation protein SEC63 homolog.// 1.00E-175// 314aa// 82%// Q9UGP8

TESTI4008401

TESTI4008429// Probable cation-transporting ATPase 2 (EC 3.6.3.-) (CGI-1

52).// 1.00E-136// 249aa// 94%// Q9HD20

TESTI4008573

TESTI4008797

TESTI4008816

TESTI4008935

TESTI4008993

TESTI4009022

TESTI4009034

TESTI4009123

TESTI4009160// Kinesin-like protein KIF2.// 6.00E-06// 39aa// 37%// P287

TESTI4009215

TESTI4009283

TESTI4009286// Homo sapiens HOTTL protein mRNA, complete cds// 2.00E-78// 180aa// 96%// AF078842

TESTI4009374// Apobec-1 complementation factor; APOBEC-1 stimulating protein; apobec-1 complementation factor [Homo sapiens]// 1.00E-120// 203aa // 68%// NM_014576

TESTI4009406

TESTI4009457// p53-inducible p53DINP1 [Homo sapiens]// 3.00E-80// 140aa// 88%// NM_033285

TESTI4009563// testis specific ankyrin-like protein 1 [Homo sapiens]// 1 .00E-140// 239aa// 94%// NM_017844

TESTI4009608// putative T1/ST2 receptor binding protein [Homo sapiens]// 1.00E-41// 125aa// 57%// NP_006849

TESTI4009638

TESTI4009881// Dynein heavy chain, cytosolic (DYHC) (Cytoplasmic dynein

heavy chain).// 5.00E-30// 176aa// 21%// Q9JHU4

TESTI4010211

TESTI4010377

TESTI4010713

TESTI4010789

TESTI4010817

TESTI4010831// yeast Sec3lp homolog; ABP125 [Homo sapiens]// 0// 780aa// 81%// NM_016211

TESTI4010851// Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thiolesterase FAF-X) (Ubiquitin-specific processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein rel ated, X-linked) (Ubiquitin-specific protease 9, X chromosome).// 2.00E-6 7// 213aa// 25%// Q93008

TESTI4010928

TEST14011118

TESTI4011161

TESTI4011246

TESTI4011484// Sec23-interacting protein pl25 [Homo sapiens]// 0// 387aa // 52%// NM_007190

TESTI4011505

TESTI4011745// WD-repeat protein 9 (Fragment).// 0// 674aa// 82%// Q9NSI 6

TESTI4011956// Ciliary dynein heavy chain (Axonemal dynein heavy chain) (Dynein heavy chain 9).// 1.00E-170// 340aa// 39%// Q9NYC9

TESTI4012086

TESTI4012329

TESTI4012406// Apolipoprotein(A) (EC 3.4.21.-) (Apo(A)) (LP(A)) (Fragmen t).// 2.00E-25// 50aa// 79%// P14417

TESTI4012448// Stromelysin-3 precursor (EC 3.4.24.-) (Matrix metalloprot

einase-11) (MMP-11) (ST3) (SL-3).// 0// 375aa// 99%// P24347

TESTI4012505// Tumor suppressor p53-binding protein 2 (p53-binding protein 2) (53BP2) (Bc12-binding protein) (Bbp).// 1.00E-81// 220aa// 34%// Q 13625

TESTI4012556

TESTI4012679// Homo sapiens cryptochrome 1 (photolyase-like) (CRY1), mRN A// 0// 330aa// 97%// NM_004075

TESTI4012702

TESTI4013369// ATP synthase lipid-binding protein, mitochondrial precurs or (EC 3.6.1.34) (ATP synthase proteolipid P3) (ATPase protein 9) (ATPase subunit C).// 7.00E-60// 119aa// 83%// P48201

TESTI4013667

TESTI4013675

TESTI4013685

TESTI4013735

TESTI4013817// novel AMP-binding enzyme similar to acetyl-coenzyme A syn thethase (acetate-coA ligase)// 8.00E-38// 99aa// 100%// CAB75500
TESTI4013830// Integral membrane glycoprotein gp210 precursor.// 0// 652 aa// 41%// P11654

TESTI4013924// Intracellular protein transport protein USO1.// 8.00E-20// 125aa// 20%// P25386

TESTI4014159

TESTI4014175// Chromodomain helicase-DNA-binding protein 3 (CHD-3) (Mi-2 autoantigen 240 kDa protein) (Mi2-alpha).// 0// 410aa// 75%// Q12873

TESTI4014306

TESTI4014392

TESTI4014445

TESTI4014694

TESTI4014818// AD-012 protein [Homo sapiens]// 1.00E-123// 217aa// 70%//

NM_018449

TESTI4014924// selective hybridizing clone [Mus musculus]// 0// 1153aa//

92%// NM_011370

TESTI4015263

TESTI4015293

TESTI4015471

TESTI4015600

TESTI4015646

TESTI4015681

TESTI4015688

TESTI4016110// DnaJ homolog subfamily B member 8 (mDJ6).// 1.00E-91// 16

5aa// 71%// Q9QYI7

TESTI4016238

TESTI4016551

TESTI4016812

TESTI4016822// Protein phosphatase inhibitor 2 (IPP-2).// 9.00E-72// 133

aa// 83%// P41236

TESTI4016882

TESTI4016925// Dynein beta chain, ciliary.// 0// 533aa// 34%// P39057

TESTI4017001

TESTI4017137

TESTI4017254

TESTI4017543// ubinuclein 1 [Homo sapiens]// 1.00E-124// 286aa// 38%// N

 M_016936

TESTI4017575

TESTI4017848

TESTI4017901// alpha-1A-adrenergic receptor, isoform 2; adrenergic, alph

a -1A-, receptor; adrenergic, alpha-1C-, receptor; alpha 1A-adrenoceptor

[Homo sapiens]// 9.00E-21// 51aa// 72%// NM_033303

TESTI4017961

TESTI4018152// protein tyrosine phosphatase, non-receptor type 13 [Mus m usculus]// 3.00E-18// 130aa// 33%// NP_035334.

TESTI4018208// MYOSIN IC HEAVY CHAIN.// 6.10E-07// 112aa// 40%// P10569

TESTI4018382

TEST14018555

TESTI4018806

TESTI4018835// Potential phospholipid-transporting ATPase IK (EC 3.6.3.1

3) (Fragment).// 0// 514aa// 88%// 060423

TESTI4018881// early endosome antigen 1, 162kD; early endosome-associate d protein [Homo sapiens]// 2.00E-14// 101aa// 22%// NM_003566

TESTI4018886// M-protein, striated muscle.// 4.00E-81// 146aa// 46%// Q0 2173

TESTI4019140// Mi-2 histone deacetylase complex protein 66 [Xenopus laev is]// 2.00E-98// 410aa// 71%// AAD55392

TESTI4019299

TESTI4019417

TESTI4019566// Dosage compensation regulator (Male-less protein) (No act ion potential protein).// 8.00E-49// 165aa// 29%// P24785

TESTI4019843// Rattus norvegicus huntingtin-associated protein interacti ng protein (duo) (Hapip), mRNA.// 0// 698aa// 91%// NM_032062
TESTI4020092// Laminin alpha-2 chain precursor (Laminin M chain) (Merosi

n heavy chain).// 3.00E-40// 74aa// 96%// P24043

TESTI4020102

TEST14020806

TEST14020920

TESTI4021294

TESTI4021456

TESTI4021478// Potential phospholipid-transporting ATPase IS (EC 3.6.3.1

3) (Fragment).// 0// 433aa// 54%// P98196

TESTI4021491

TESTI4022716// RNA helicase [Homo sapiens]// 0// 817aa// 95%// NM_014314

TESTI4022873// Dynein gamma chain, flagellar outer arm.// 3.00E-09// 106

aa// 19%// Q39575

TESTI4022936

TESTI4023546// Sialidase (EC 3.2.1.18) (Neuraminidase) (NA) (Major surfa

ce antigen).// 6.00E-32// 134aa// 23%// P23253

TESTI4023555

TESTI4023722

TESTI4023762// Trichohyalin.// 5.00E-12// 94aa// 22%// P37709

TESTI4023942

TESTI4024344

TESTI4024420// multidomain presynaptic cytomatrix protein Piccolo [Rattu

s norvegicus]// 0// 789aa// 82%// NM_020098

TESTI4024874

TESTI4024890

TESTI4024907

TESTI4025731

TESTI4025797

TESTI4025920// B29 protein [Homo sapiens]// 2.00E-34// 73aa// 38%// NM_0

31939

TESTI4026079

TESTI4026192

TESTI4026295

TESTI4026456

TESTI4026510// RNA helicase [Homo sapiens]// 0// 445aa// 89%// NM_016130

TESTI4026524// Chromodomain helicase-DNA-binding protein 4 (CHD-4) (Mi-2

autoantigen 218 kDa protein) (Mi2-beta).// 0// 388aa// 59%// Q14839

TESTI4026700

TESTI4026762

TESTI4026785

TESTI4027516

TESTI4027557// Galectin-9 (HOM-HD-21) (Ecalectin).// 1.00E-176// 306aa//

86%// 000182

TESTI4027821

TESTI4028059//-6-phosphofructokinase, muscle type (EC 2.7.1.11) (Phospho

fructokinase 1) (Phosphohexokinase) (Phosphofructo-1-kinase isozyme A) (

PFK-A).// 0// 450aa// 96%// P08237

TESTI4028062

TESTI4028429// Eppin precursor.// 2.00E-32// 61aa// 76%// 095925

TESTI4028612

TESTI4028809

TESTI4028823// Niemann-Pick Cl protein precursor.// 6.00E-22// 127aa// 2

2%// P56941

TESTI4028880// Glucose transporter type 3, brain.// 0// 436aa// 88%// Pl

1169

TESTI4028983

TESTI4029370

TESTI4029671

TESTI4029836// Potential phospholipid-transporting ATPase IB (EC 3.6.3.1)

3).// 0// 888aa// 93%// P98200

TESTI4030069// fer-1 (C.elegans)-like 3 (myoferlin); fer-1 (C. elegans)-

like 3 [Homo sapiens]// 4.00E-22// 64aa// 38%// NM_013451

TESTI4030159

TESTI4030505

TESTI4030603

```
TESTI4032895
```

TESTI4033433

TESTI4033690

TESTI4034172

TESTI4034212

TESTI4034432

TESTI4034632// polypeptide N-acetylgalactosaminyltransferase 9; UDP-GalN

Ac: polypeptide N-acetylgalactosaminyltransferase 9; GalNAc transferase

9; protein-UDP acetylgalactosaminyltransferase 9 [Homo sapiens]// 1.00E-

113// 182aa// 60%// NM_021808

TESTI4034912// Intracellular protein transport protein US01.// 6.00E-38// 219aa// 21%// P25386

TESTI4035063// Restin (Cytoplasmic linker protein-170 alpha-2) (CLIP-170) (Reed- Sternberg intermediate filament associated protein).// 1.00E-17

// 72aa// 27%// P30622

TESTI4035065

TESTI4035498// Septin-like protein KIAA0202 (Fragment).// 7.00E-58// 112 aa// 49%// Q92599

TESTI4035602

TESTI4035637

TESTI4035649

TESTI4036042

TESTI4036909// Regulator of nonsense transcripts 1 homolog.// 9.00E-50// 140aa// 32%// Q9FJR0

TESTI4037066

TESTI4037156// WHSC2 protein [Homo sapiens]// 0// 425aa// 80%// NM_00566

TESTI4037188

TESTI4037727// Dynein beta chain, ciliary.// 0// 573aa// 73%// P39057

TESTI4038156

TESTI4038223

TESTI4038258

TESTI4038339

TESTI4038492

TESTI4038818

TESTI4039038

TESTI4039086

TESTI4039659// DnaJ homolog subfamily B member 8 (mDJ6).// 1.00E-91// 16

5aa// 71%// Q9QYI7

TESTI4040363// Surfeit locus protein 5.// 3.00E-62// 120aa// 100%// Q155

28

TESTI4040800

TESTI4040939

TESTI4040956

TESTI4041053

TESTI4041099

TESTI4041143

TESTI4041519

TESTI4041624

TESTI4041903

TESTI4041954

TESTI4042098

TESTI4042444

TESTI4042711

TESTI4043129

TESTI4043203

TESTI4043947 TESTI4044035 TESTI4044084 TESTI4044123 TESTI4044186// leucine-rich, glioma inactivated 1 [Mus musculus]// 6.00E -65// 110aa// 60%// NM_020278 TESTI4044234 TESTI4044296 TESTI4044682 TESTI4045312 TESTI4046253 TESTI4046282 TESTI4046487// plexin 1 [Mus musculus]// 0// 433aa// 97%// NM_008881 TESTI4046819// Glucoamylase S1/S2 precursor (EC 3.2.1.3) (Glucan 1,4-alp ha- glucosidase) (1,4-alpha-D-glucan glucohydrolase).// 4.00E-12// 134aa // 21%// P08640 TESTI4046884 TESTI4047069 THYMU1000496// KINESIN-LIKE PROTEIN KIF1C.// 6.40E-61// 210aa// 53%// 04 3896 THYMU1000600 THYMU2000932 THYMU2001053 THYMU2001090 THYMU2003397 THYMU2003632 THYMU2003760 THYMU2004693

THYMU2005003

THYMU2005190

THYMU2005303// T-CELL SURFACE GLYCOPROTEIN CD8 ALPHA CHAIN PRECURSOR (T-LYMPHOCYTE DIFFERENTIATION ANTIGEN T8/LEU-2).// 4.2E-56// 111aa// 100%// P01732

THYMU2005321

THYMU2006420// TRANSCRIPTION FACTOR-LIKE PROTEIN MRGX (KIAA0026).// 2.00 E-129// 268aa// 92%// Q15014

THYMU2007060// Mus musculus Cdc42 GTPase-activating protein mRNA, comple te cds.// 1.50E-37// 270aa// 40%// AF151363

THYMU2007179

THYMU2007658

THYMU2008282

THYMU2008725// PROTEIN-TYROSINE PHOSPHATASE BETA PRECURSOR (EC 3.1.3.48) (R-PTP- BETA).// 5.90E-192// 358aa// 98%// P23467

THYMU2009134

THYMU2009157// Mus musculus MRPS18b mRNA for mitochondrial ribosomal protein S18b, complete cds.// 5.00E-38// 97aa// 77%// AB049954

THYMU2009425// OLFACTORY RECEPTOR-LIKE PROTEIN HGMP07J.// 4.90E-46// 173 aa// 53%// P30954

THYMU2011548// olfactory receptor 67 [Mus musculus]// 2.50E-56// 307aa// 39%// NP_038647

THYMU2011736// latent transforming growth factor beta binding protein $3/\sqrt{0/200aa//99\%//NP_066548}$

THYMU2013386// COTE1 PROTEIN.// 2.50E-25// 269aa// 28%// P81408

THYMU2014353

THYMU2016204

THYMU2016523

THYMU2019210// HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4002 ALPHA CHAIN PRECURSOR.// 2.1E-195// 248aa// 100%// Q04826

THYMU2019587

THYMU2023711// Homo sapiens mRNA for immunoglobulin lambda heavy chain./

THYMU2023967

THYMU2025707

THYMU2027497// 5-HYDROXYTRYPTAMINE 3 RECEPTOR PRECURSOR (5-HT-3) (SEROTO

NIN-GATED ION CHANNEL RECEPTOR) (5-HT3R).// 2E-10// 186aa// 24%// P46098

THYMU2027695// Ig gamma-1 chain C region.// 1.00E-169// 295aa// 78%// P0

1857

THYMU2027734// Homo sapiens SA hypertension-associated homolog (rat) (SA H), mRNA.// 2.00E-39// 72aa// 42%// NM_005622

THYMU2028978

THYMU2029676

THYMU2029688

THYMU2030068

THYMU2030226

THYMU2030264

THYMU2030637

THYMU2030796

THYMU2031046// Copine III.// 4.00E-28// 60aa// 75%// 075131

THYMU2031218

THYMU2031258// Homo sapiens oxysterol-binding protein-related protein (0)

RP1) mRNA, complete cds.// 4.0E-45// 125aa// 64%// AF274714

THYMU2031341

THYMU2031368

THYMU2031579

THYMU2031847

THYMU2031890

THYMU2032014// src homology 3 domain-containing protein HIP-55; HIP-55 p

rotein [Homo sapiens]// 2.00E-84// 147aa// 90%// NM_014063

THYMU2032035

THYMU2032080

THYMU2032358

THYMU2032437

THYMU2032655

THYMU2032696

THYMU2032825// Mus musculus mRNA for Drctnnb1a, complete cds.// 2.3E-74/ / 202aa// 71%// AB030242

THYMU2033070

THYMU2033079// ATP-binding cassette protein [Mus musculus].// 2.00E-53//105 105

THYMU2033104// nuclear prelamin A recognition factor, isoform a [Homo sa piens]// 5.00E-34// 111aa// 47%// NP_036468

THYMU2033308

THYMU2033787

THYMU2033816

THYMU2034314

THYMU2034374// Homo sapiens MAID protein mRNA, complete cds.// 1.5E-75// 146aa// 100%// AF113535

THYMU2034647

THYMU2035064

THYMU2035101

THYMU2035319// Homo sapiens RNA-binding region (RNP1, RRM) containing 2 (RNPC2)// 0// 354aa// 81%// NM_004902

THYMU2035388

THYMU2035400

THYMU2035735// Oryctolagus cuniculus sarcolemmal associated protein-3 mR NA, complete cds.// 3.6E-154// 350aa// 90%// U21157

THYMU2036058

THYMU2036085

THYMU2036252

THYMU2036265

THYMU2036459// 240 KDA PROTEIN OF ROD PHOTORECEPTOR CNG-CHANNEL [CONTAIN S: GLUTAMIC ACID-RICH PROTEIN (GARP); CYCLIC-NUCLEOTIDE-GATED CATION CHANNEL 4 (CNG CHANNEL 4) (CNG-4) (CYCLIC NUCLEOTIDE-GATED CATION CHANNEL M ODULATORY SUBUNIT)].// 1.40E-13// 527aa// 24%// Q28181

THYMU2036653

THYMU2037081

THYMU2037208

THYMU2037226

THYMU2037233// RNA polymerase I transcription factor RRN3 [Homo sapiens] // 1.00E-71// 143aa// 95%// NP_060897

THYMU2037348

THYMU2037965

THYMU2038189

THYMU2038301// Homo sapiens mRNA for PRP8 protein, complete cds.// 3.90E -52// 112aa// 98%// AB007510

THYMU2038369// Mus musculus GTRGE022 (Gtrgeo22) mRNA, complete cds.// 1.

10E-111// 262aa// 83%// AF303106

THYMU2038615

THYMU2038636

THYMU2038739

THYMU2038772

THYMU2038797// B locus C type Lectin [Gallus gallus]// 2.90E-15// 147aa// 34%// CAA18961

THYMU2039305// 70 KDA WD-REPEAT TUMOR-SPECIFIC ANTIGEN (FRAGMENT).// 6.9 0E-40// 98aa// 83%// 035828

THYMU2039315// Caenorhabditis elegans LIN-9L (lin-9) mRNA, complete cds.

// 8.70E-66// 444aa// 34%// AF269693

THYMU2039350

THYMU2039411

THYMU2039780

THYMU2039989

THYMU2040140

THYMU2040412

THYMU2040824

THYMU2040975// PTB-ASSOCIATED SPLICING FACTOR (PSF).// 1.30E-08// 119aa// 36%// P23246

THYMU2041007

THYMU2041015// Monocarboxylate transporter 8 (MCT 8) (X-linked PEST-cont aining transporter) (MCT 7).// 1.00E-132// 230aa// 54%// P36021

THYMU2041252

THYMU3000028// Rat Tamm-Horsfall protein mRNA, complete cds.// 1.3E-21// 253aa// 28%// M63510

THYMU3000036

THYMU3000133

THYMU3000655

THYMU3000826

THYMU3001083// Tubulin epsilon chain (Epsilon tubulin).// 5.00E-26// 58a a// 98%// Q9UJTO

THYMU3001234// Dynamin 2 (EC 3.6.1.50) (Dynamin UDNM).// 1.00E-56// 108a a// 90%// P39054

THYMU3001379// 116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP- specific protein, 116 kDa) (U5-116 kDa).// 0// 492aa// 100%// Q15 029

THYMU3001472

THYMU3001991// ART-4 protein [Homo sapiens]// 2.00E-46// 88aa// 97%// NM _014062

THYMU3002452

THYMU3002661

THYMU3003212// Saccharomyces cerevisiae TAD2 gene for tRNA-specific aden osine-34 deaminase subunit Tad2p.// 1.10E-21// 135aa// 40%// AJ242667 THYMU3003309// putative tumor antigen [Homo sapiens]// 2.00E-52// 105aa// 66%// NM_018666

THYMU3003763

THYMU3004157// peroxisomal acyl-CoA thioesterase [Homo sapiens]// 3.00E-44// 85aa// 82%// NM_005469

THYMU3004835// Probable beta-1,3-galactosyltransferase 8 (EC 2.4.1.-) (B eta-1,3- GalTase 8) (Beta3Gal-T8) (b3Gal-T8) (UDP-galactose:beta-N- acet ylglucosamine beta-1,3-galactosyltransferase 8) (UDP-Gal:beta- GlcNAc be ta-1,3-galactosyltransferase 8) (Beta-3-Gx-T8).// 2.00E-78// 146aa// 43% // Q9Y2A9

THYMU3004866// TPA inducible gene-1; TPA inducible protein [Homo sapiens]// 3.00E-47// 93aa// 86%// NM_015889

THYMU3005696

THYMU3006118// molybdenum cofactor synthesis 2 [Homo sapiens]// 3.00E-60 // 112aa// 100%// NM_004531

THYMU3006132

THYMU3006168

THYMU3006172// membrane bound C2 domain containing protein [Rattus norve gicus]// 1.00E-145// 460aa// 52%// NP_058945

THYMU3006371

THYMU3006485

THYMU3006811// ATP-binding cassette, sub-family A, member 7, isoform a// 3.00E-11// 82aa// 41%// NP_061985

```
THYMU3006963
```

THYMU3007137// Interleukin-16 precursor (IL-16) (Lymphocyte chemoattract

ant factor) (LCF).// 0// 528aa// 83%// Q14005

THYMU3007368

THYMU3007845

THYMU3008171

THYMU3008436// 6-phosphofructokinase, muscle type (EC 2.7.1.11) (Phospho

fructokinase 1) (Phosphohexokinase) (Phosphofructo-1-kinase isozyme A) (

PFK-A).// 0// 764aa// 98%// P08237

THYMU3009255

TKIDN2000701// ankyrin G // 1.6E-90// 178aa// 100%// AAA64834

TKIDN2002424

TKIDN2002632

TKIDN2003044

TKIDN2004386

TKIDN2005934

TKIDN2005947

TKIDN2006525

TKIDN2006852// Homo sapiens cytosolic phospholipase A2 gamma (cPLA2 gamm

a) mRNA, complete cds.// 4.3E-103// 192aa// 100%// AF065214

TKIDN2007667

TKIDN2009092

TKIDN2009641

TKIDN2009889

TKIDN2010934

TKIDN2012824

TKIDN2013287

TKIDN2014757

TKIDN2014771

TKIDN2015263

TKIDN2015788

TKIDN2016309

TKIDN2019116

TLIVE2000023

TLIVE2001327// Human DOCK180 protein mRNA, complete cds.// 0// 961aa// 6

3%// D50857

TLIVE2001828

TLIVE2001927

TLIVE2002336// ectonucleotide pyrophosphatase/phosphodiesterase 5 [Mus m usculus]// 7.00E-69// 144aa// 36%// NM_032003

TLIVE2002338

TLIVE2002690

TLIVE2003197

TLIVE2003225// CUB and Sushi multiple domains 1 [Homo sapiens]// 1.00E-1

29// 199aa// 58%// NM_033225

TLIVE2003381// taste receptor, type 1, member 3; saccharin preference [M us musculus]// 8.00E-65// 112aa// 79%// NM_031872

TLIVE2003970

TLIVE2004110

TLIVE2004320// Homo sapiens PC2-glutamine-rich-associated protein (PCQAP) mRNA, complete cds.// 4.7E-201// 368aa// 99%// AF328769

TLIVE2004601

TLIVE2005180

TLIVE2006236

TLIVE2006529

TLIVE2007132

TLIVE2007528

TLIVE2007816

TLIVE2008083

TLIVE2008229// SIGNAL RECOGNITION PARTICLE 68 KDA PROTEIN (SRP68).// 1.0

0E-299// 506aa// 96%// Q00004

TLIVE2009541

TOVAR2000649

TOVAR2001281

TOVAR2001730

TOVAR2002247// Homo sapiens partial partial mRNA for NICE-4 protein, clo ne 3114f17.// 1.0E-117// 218aa// 100%// AJ243670

TOVAR2002549

TRACH1000205

TRACH2001443

TRACH2001549// Homo sapiens mRNA for neuropathy target esterase. // 1.10E -94// 295aa// 65%// AJ004832

TRACH2001684

TRACH2003070

TRACH2004170

TRACH2005066

TRACH2005811

TRACH2006049

TRACH2006387// P2Y PURINOCEPTOR 1 (ATP RECEPTOR) (P2Y1) (PURINERGIC RECEPTOR).// 2E-56// 307aa// 36%// P49650

TRACH2007059// Folate hydrolase (Prostate-specific membrane antigen 1)./ 2.00E-37// 127aa// 26%// Q04609

TRACH2007834

TRACH2008300

TRACH2009310// PUTATIVE SERINE/THREONINE-PROTEIN KINASE D1044.3 IN CHROM

OSOME III (EC 2.7.1.-).// 9.40E-85// 407aa// 38%// P41951

TRACH2019248

TRACH2019473

TRACH2020525

TRACH2021398

TRACH2021964

TRACH2022042

TRACH2022425// Ig alpha-1 chain C region.// 0// 319aa// 91%// P01876

TRACH2022553// Human germline IgD-chain gene, C-region, second domain of membrane terminus.// 1.70E-234// 429aa// 99%// K02882

TRACH2022649// Ig gamma-1 chain C region.// 0// 315aa// 95%// P01857

TRACH2023299// growth factor receptor bound protein 2-associated protein 2 [Mus musculus]// 5.00E-40// 77aa// 58%// NM_010248

TRACH2023306

TRACH2025344

TRACH2025507// tumor suppressing subtransferable candidate 1; tumor-supressing STF cDNA 1 [Homo sapiens]// 4.00E-48// 87aa// 74%// NM_003310 TRACH2025535// evectin-2 [Mus musculus]// 2.00E-75// 230aa// 90%// AAF01 332

TRACH2025749

TRACH2025911

TRACH2025932

TRACH3000014

TRACH3000342

TRACH3000558// CREB-BINDING PROTEIN.// 1.9E-90// 120aa// 100%// Q92793

TRACH3000586

TRACH3000926// cardiac morphogenesis [Mus musculus]// 0// 417aa// 63%//

NM_011724

TRACH3001427// p47 [Homo sapiens]// 2.00E-85// 167aa// 49%// NM_016143

TRACH3002064

TRACH3002168// Cell surface glycoprotein MUC18 precursor (Melanoma-assoc

iated antigen MUC18) (Melanoma-associated antigen A32) (S-endo 1 endothe lial- associated antigen) (CD146 antigen) (Melanoma adhesion molecule)./
/ 0// 341aa// 94%// P43121

TRACH3002192

TRACH3002650

TRACH3002866

TRACH3002871

TRACH3003379

TRACH3004068

TRACH3004537

TRACH3004721// 80 kda MCM3-associated protein (GANP protein).// 0// 474a a// 77%// 060318

TRACH3004786// Claudin-4 (Clostridium perfringens enterotoxin receptor)

(CPE- receptor) (CPE-R).// 2.00E-90// 162aa// 77%// 014493

TRACH3004840

TRACH3005294

TRACH3005479

TRACH3005549// Ig heavy chain V region IR2 precursor.// 4.00E-47// 89aa// 61%// P01805

TRACH3006038

TRACH3006149

TRACH3006228

TRACH3006412// Homo sapiens COP9 constitutive photomorphogenic homolog s ubunit 7B// 3.00E-57// 105aa// 99%// NM_022730

TRACH3006470

TRACH3006889

TRACH3007391

TRACH3007479// Nedd-4-like ubiquitin-protein ligase; WW domain-containing protein 2 [Homo sapiens]// 0// 320aa// 93%// NM_007014

TRACH3008093

TRACH3008535

TRACH3008629// Cadherin-related tumor suppressor homolog precursor (Fat protein homolog).// 6.00E-36// 143aa// 28%// Q14517

TRACH3008713// Beta-soluble NSF attachment protein (SNAP-beta) (N-ethylm aleimide- sensitive factor attachment protein, beta) (Brain protein I47) (Fragment).// 4.00E-52// 98aa// 92%// P28663

TRACH3009455// Phosphatidylinositol 3-kinase regulatory alpha subunit (P I3-kinase P85-alpha subunit) (PtdIns-3-kinase P85-alpha) (PI3K).// 0// 3 86aa// 95%// P27986

TRACH3034731// Ras association (RalGDS/AF-6) domain family 2// 7.00E-56/ / 320aa// 40%// NP_055552

TRACH3034762

TRACH3035199// antigen identified by monoclonal antibody MRC OX-2 recept or [Rattus norvegicus]// 1.00E-86// 170aa// 51%// NM_023953

TRACH3035235

TRACH3035482

TRACH3035526// Ig alpha-2 chain C region.// 0// 324aa// 95%// P01877
TRACH3036193// Genome polyprotein [Contains: Coat proteins VP1 TO VP4; C ore proteins P2A TO P2C, P3A; Genome-linked protein VPG; Picornain 3C (E C 3.4.22.28) (Protease 3C) (P3C); RNA-directed RNA polymerase P3D (EC 2. 7.7.48)].// 0// 1073aa// 69%// Q82122

TRACH3036207

TRACH3036309

TRACH3036456

TRACH3036609// J kappa-recombination signal binding protein (RBP-J kappa).// 1.00E-158// 271aa// 89%// P31266

TSTOM1000135

TSTOM2000442// Ig gamma-1 chain C region.// 1.00E-168// 292aa// 77%// PO

```
1857
```

TSTOM2000553// SYNAPTOTAGMIN IV.// 3.00E-08// 150aa// 28%// P40749

TST0M2002672

TUTER1000122

TUTER2000425// zinc finger protein SBZF3 [Homo sapiens]// 4.00E--36// 74a

a// 81%// NM_020394

TUTER2000904// Unc-119 protein homolog (Retinal protein 4) (RRG4).// 7.0

0E-72// 129aa// 70%// Q62885

TUTER2000916

TUTER2001387

TUTER2002729// D6MM5E protein [Mus musculus]// 1.00E-107// 191aa// 68%//

NM_033079

UTERU1000024

UTERU1000031// G.gallus mRNA for tom-1B protein. // 2.1E-149// 535aa// 59

%// Y08741

UTERU1000148

UTERU1000249

UTERU1000337// Putative protein phosphatase 2C (EC 3.1.3.16) (PP2C).// 1

.00E-156// 271aa// 94%// P49593

UTERU1000339

UTERU2000649

UTERU2001409

UTERU2002410

UTERU2002841

UTERU2004688

UTERU2004929

UTERU2005004

UTERU2005621// CDC14 homolog B, isoform 2 [Homo sapiens]// 0// 423aa// 9

4%// NM_033331

UTERU2006115// ALPHA-ADAPTIN A (CLATHRIN ASSEMBLY PROTEIN COMPLEX 2 ALPH A-A LARGE CHAIN) (100 KDA COATED VESICLE PROTEIN A) (PLASMA MEMBRANE ADA PTOR HA2/AP2 ADAPTIN ALPHA A SUBUNIT).// 9.0E-141// 268aa// 99%// P17426

UTERU2006568

UTERU2006137

UTERU2007444

UTERU2007520

UTERU2007724// Calponin H2, smooth muscle (Neutral calponin).// 1.00E-14 4// 253aa// 86%// Q99439

UTERU2008347// Chlamydomonas reinhardtii vegetative cell wall protein gp 1 (GP1) gene, complete cds.// 1.0E-19// 199aa// 30%// AF309494 UTERU2014678

UTERU2017762// plexin B1; KIAA0407 protein; plexin 5 [Homo sapiens]// 0// 383aa// 60%// NM_002673

UTERU2019491// Homo sapiens mRNA for 41-kDa phosphoribosylpyrophosphate synthetase-associated protein, complete cds.// 4.30E-48// 101aa// 100%// AB007851

UTERU2019681 ·

UTERU2019706// T-COMPLEX PROTEIN 1, GAMMA SUBUNIT (TCP-1-GAMMA).// 9.80E-273// 426aa// 99%// P49368

UTERU2019940// mitochondrial ribosomal protein L30 [Homo sapiens]// 2.00 E-44// 82aa// 97%// NM_016503

UTERU2020491

UTERU2020718

UTERU2021163

UTERU2021380

UTERU2022020

UTERU2022981

UTERU2023039

UTERU2023175

UTERU2023651

UTERU2023712

UTERU2024002

UTERU2024656

UTERU2025025// High affinity nerve growth factor receptor precursor (EC 2.7.1.112) (TRK1 transforming tyrosine kinase protein) (p140-TrkA) (Trk-A).// 0// 479aa// 95%// P04629

UTERU2025645

UTERU2025891

UTERU2026025// SPLICING FACTOR, ARGININE/SERINE-RICH 2 (SPLICING FACTOR SC35) (SC-35) (SPLICING COMPONENT, 35 KDA) (PR264 PROTEIN).// 8.00E-30//61aa// 100%// P30352

UTERU2026090// Cartilage-associated protein precursor.// 1.00E-180// 309 aa// 87%// 075718

UTERU2026203// phosphoinositide phosphatase SAC1 [Rattus norvegicus].//
1.00E-107// 221aa// 95%// AAG29810

UTERU2027591// calcium-activated potassium channel // 7.8E-33// 79aa// 94%// AAA50216

UTERU2029953

UTERU2030213

UTERU2030280

UTERU2031084

UTERU2031268// NY-REN-25 antigen [Homo sapiens].// $1.00E-41/\!/$ 330aa// 49

%// AAD42869

UTERU2031521

UTERU2031703

UTERU2031851

UTERU2033375

UTERU2033382

UTERU2035114

UTERU2035323

UTERU2035328// Homo sapiens putative transcription factor CA150 mRNA, complete cds.// 1.80E-271// 796aa// 70%// AF017789

UTERU2035331

UTERU2035452// NG3 [Homo sapiens]// 1.00E-136// 150aa// 99%// AAB47494
UTERU2035469// Mus musculus microfibril-associated glycoprotein-2 (Magp2)
mRNA, complete cds.// 1.2E-52// 164aa// 66%// AF180805

UTERU2035503

UTERU2035745// MYOSIN IA HEAVY CHAIN (MYOSIN-LIKE PROTEIN ABMA).// 1.30E -11// 101aa// 31%// P22467

UTERU2036089// SH3-BINDING PROTEIN 3BP-1.// 4.1E-168// 369aa// 86%// P55 194

UTERU2037361

UTERU2037577

UTERU2038251

UTERU3000226

UTERU3000645// Claudin-4 (Clostridium perfringens enterotoxin receptor)

(CPE- receptor) (CPE-R).// 3.00E-89// 161aa// 77%// 014493

UTERU3000665// Snf2-related CBP activator protein [Homo sapiens].// 7.00 E-59// 500aa// 97%// NP 006653

UTERU3000828// 116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP- specific protein, 116 kDa) (U5-116 kDa).// 0// 931aa// 95%// Q150 29

UTERU3000899// hTGN51 [Homo sapiens].// 1.00E-101// 281aa// 72%// AAC395

UTERU3001059// ABC1 protein homolog, mitochondrial precursor.// 2.00E-99 // 188aa// 48%// Q92338

UTERU3001240// Adenylate cyclase, type IV (EC 4.6.1.1) (ATP pyrophosphat e-lyase) (Adenylyl cyclase).// 1.00E-176// 308aa// 81%// P26770

UTERU3001571

UTERU3001542

UTERU3001572// Neuroblast differentiation associated protein AHNAK (Desm oyokin) (Fragments).// 6.00E-19// 213aa// 21%// Q09666 UTERU3001585// Cytochrome P450 4c3 (EC 1.14.-.-) (CYPIVC3).// 1.00E-125/

/ 230aa// 49%// Q9VA27

UTERU3001652// 64 KDA AUTOANTIGEN D1 (THYROID-ASSOCIATED OPHTHALMOPATHY AUTOANTIGEN).// 1.00E-219// 416aa// 99%// P29536

UTERU3001766

UTERU3001988// COATOMER EPSILON SUBUNIT (EPSILON-COAT PROTEIN) (EPSILON-COP).// 1.70E-126// 159aa// 94%// Q28104

UTERU3002209

UTERU3002218

UTERU3002383

UTERU3002667

UTERU3002731

UTERU3002768

UTERU3002786

UTERU3002993

UTERU3003116// ADAM 12 precursor (EC 3.4.24.-) (A disintegrin and metall oproteinase domain 12) (Meltrin alpha).// 1.00E-20// 48aa// 44%// 043184 UTERU3003135// Splicing factor 3B subunit 2 (Spliceosome associated prot ein 145) (SAP 145) (SF3b150) (Pre-mRNA splicing factor SF3b 145 kDa subunit).// 6.00E-29// 62aa// 83%// Q13435

UTERU3003178// Kinesin light chain 2 (KLC 2).// 0// 312aa// 88%// Q9H0B6

UTERU3003465

UTERU3003523

UTERU3003776

UTERU3004523

UTERU3004616

UTERU3004709

UTERU3004992// Aortic preferentially expressed protein 1 (APEG-1).// 3.0

0E-61// 113aa// 100%// Q15772

UTERU3005049

UTERU3005205

UTERU3005230

UTERU3005460

UTERU3005585// rhophilin-like protein [Homo sapiens]// 0// 380aa// 91%// NM_033103

UTERU3005907// PROTEIN-GLUTAMINE GAMMA-GLUTAMYLTRANSFERASE (EC 2.3.2.13)
(TISSUE TRANSGLUTAMINASE) (TGASE C) (TGC) (TGASE-H).// 1.30E-75// 152aa
// 98%// P21980

UTERU3005970

UTERU3006008

UTERU3006308// SEMAPHORIN 4C PRECURSOR (SEMAPHORIN I) // 1.00E-128// 330 aa// 86%// Q64151

UTERU3007134

UTERU3007419// Rattus norvegicus Ca2+-dependent activator protein (CAPS) mRNA, complete cds.// 0// 1223aa// 78%// U16802

UTERU3007640// N-ethylmaleimide-sensitive factor attachment protein, alp ha;// 5.00E-54// 110aa// 87%// NP_003818

UTERU3007913

UTERU3008660

UTERU3008671// SPARC precursor (Secreted protein acidic and rich in cyst eine) (Osteonectin) (ON) (Basement membrane protein BM-40).// 4.00E-25// 49aa// 96%// P09486

UTERU3009259

UTERU3009490// LYSP100 protein (Lymphoid-restricted homolog of Sp100) (Nuclear autoantigen Sp-140) (Speckled 140 kDa) (Nuclear body protein Sp140).// 4.00E-33// 67aa// 61%// Q13342

UTERU3009517

UTERU3009690// alpha-1A-adrenergic receptor, isoform 2; adrenergic, alpha a -1A-, receptor; adrenergic, alpha-1C-, receptor; alpha 1A-adrenoceptor [Homo sapiens]// 5.00E-16// 41aa// 67%// NM_033303

UTERU3009871// feminization 1 homolog a (C. elegans)// 0// 588aa// 85%// NP_034322

UTERU3009979// growth arrest-specific 6; AXL stimulatory factor [Homo sa piens]// 0// 572aa// 97%// NM_000820

UTERU3011063// Transmembrane 9 superfamily protein member 4.// 0// 402aa // 89%// Q92544

UTERU3015086

UTERU3015500// G protein-coupled receptor 49// 1.00E-15// 350aa// 29%// NP_003658

UTERU3016789// SH3 domain-binding protein 3BP-2.// 1.00E-146-/ 261aa// 7

5%// P78314

UTERU3018081

UTERU3018154

UTERU3018616

UTERU3018711

[0335]

【配列表】

SEQUENCE LISTING

<110> Research Association for Biotechnology

<120> Full length cDNA

<130> BTR-A0201

<160> 4380

<170> PatentIn Ver. 3.1

<210> 1

<211> 1802

<212> DNA

<213> Homo sapiens

aaaaaaactc acto	ctacaat cccgtttt	ta atgtaagctt	actacttagc	tacacagcgc	60
atcagggaga aaga	atgatga ctatagag	aa agctagtgct	tgttgcttgc	ttttttaacc	120
tcaactttgt gctt	tcactgt gctctgtt	ta ttctgaagct	tccccaattt	tatatatgag	180
tttataagaa aact	tttctag ctaagatt	gg tgatgatgat	aataatatta	cttaaaattt	240
gtaaagcaat tatt	tactgga gagtaaaa	ag aactacgtgg	atcttgaccc	ttggaagact	300
tgttaggaga catt	taagatt aagattgg	ta tccaattata	acaagtgatg	gataggcagc	360
ttttcctctc cctc	ccttctt tttttcct	cc cctcttcaca	tttctctcct	tcctttcttt	420
ctttttcatc atto	cctcttt cttcatag	gg ctgctatttc	tgctctgata	gcctgggttt	480
ctcacagtgc tatt	tatgcaa ttaaataa	ca cataagaaac	tgttttaaac	tttaaagaac	540
cctatggaat tgtt	tttgtga ttataatg	at cacttttgtg	ctattttggg	atgacaatca	600
aagatgatat catg	ggatgaa aatacagc	aa ttgactcatg	aatatttctt	tctttctatc	660
cagcacatga aact	tgaagta cagatagt:	aa tggacttttc	atactgtttt	tattaattga	720
ttgatagcag cagt	taatacc tttgtctc	ca ttctgtttca	gggtttctgt	aaacacatgc	780
acacacacac acac	cacacac acaactcc	ca agatggcgga	cctactgggc	tccatcctga	840
gctccatgga gaag	gccaccc agcctcgg	tg accaggagac	tcggcgcaag	gcccgagaac	900

aggccgcccg	cctgaagaaa	ctacaagagc	aagagaaaca	acagaaagtg	gagtttcgta	960
aaaggatgga	gaaggaggtg	tcagatttca	ttcaagacag	tgggcagatc	aagaaaaagt	1020
ttcagccaat	gaacaagatc	gagaggagca	tactacatga	tgtggtggaa	gtggctggcc	1080
tgacatcctt	ctcctttggg	gaagatgatg	actgtcgcta	tgtcatgatc	ttcaaaaaagg	1140
agtttgcacc	ctcagatgaa	gagctagact	cttaccgtcg	tggagaggaa	tgggaccccc	1200
agaaggctga	ggagaagcgg	aagctgaagg	agctggccca	gaggcaagag	gaggaggcag	1260
cccagcaggg	gcctgtggtg	gtgagccctg	ccagcgacta	caaggacaag	tacagccacc	1320
tcatcggcaa	gggagcagcc	aaagacgcag	cccacatgct	acaggccaat	aagacctacg	1380
gctgtgtgcc	cgtggccaat	aagagggaca	cacgctccat	tgaagaggct	atgaatgaga	1440
tcagagccaa	gaagcgtctg	cggcagagtg	gggaagagtt	gccgccaacc	tcctaggcgc	1500
cccgcccagc	tccctttgac	ccctggggca	gggcaggggg	cagggagaga	caaggctgct	1560
gctattagag	cccatcctgg	agccccacct	ctgaaccacc	tcctaccagc	tgtccctcag	1620
gctgggggaa	aacaggtgtt	tgatttgtca	ccgttggagc	ttggatatgt	gcgtggcatg	1680
tgtgtgtgtg	tgtgagagtg	tgaatgcaca	ggtgggtatt	taatctgtat	tattccccgt	1740
tcttggaatt	ttcttcccca	tggggctggg	gtacttcaca	ttcaataaat	actgtttaac	1800
сс						1802

<211> 1278

<212> DNA

<213> Homo sapiens

ggagctgcgg	gagccgggct	ggcaggagca	ggatggcggc	ggcggcggct	gcaggcgagg.	60
cgcgccgggt	gctggtgtac	ggcggcaggg	gcgctctggg	ttctcgatgc	gtgcaggctt	120
ttcgggcccg	caactgggtg	actgctgagg	ttggaaagct	cttgggtgaa	gagaaggtgg	180
atgcaattct	ttgcgttgct	ggaggatggg	ccgggggcaa	tgccaaatcc	aagtctctct	240
ttaagaactg	tgacctgatg	tggaagcaga	gcatatggac	atcgaccatc	tccagccatc	300

tggctaccaa	gcatctcaag	gaaggaggcc	tcctgacctt	ggctggcgca	aaggctgccc	360
tggatgggac	tcctggtatg	atcgggtacg	gcatggccaa	gggtgctgtt	caccagctct	420
gccagagcct	ggctgggaag	aacagcggca	tgccgcccgg	ggcagccgcc	atcgctgtgc	480
tcccggttac	cctggatacc	ccgatgaaca	ggaaatcaat	gcctgaggct	gacttcagct	540
cctggacacc	cttagaattc	ctagttgaaa	ctttccatga	ctggatcaca	gggaaaaaacc	600
gaccgagctc	aggaagccta	atccaggtgg	taaccacaga	aggaaggacg	gaactcaccc	660
cagcatattt	ttaggcctca	tctcagtgcc	tatgaggggc	ctgccagaaa	agtcactaac	720
ctgtctcagt	gtggccttgt	ccagccttgt	gttttctgta	accctgttt	gtggtacgag	780
ataatgagtc	ctatttttct	ctcacataat	atgcatttgc	tctcctagga	cagtgtaata	840
catttatgtg	aagtaaagac	atgcgagact	ggtggcctgc	aaatagcatc	cgttgatctg	900
tgttaactgc	atagggaggg	ctctgcatag	cacctgctat	agcggtgtca	tgttggatcg	960
cttttgtgac	tgttcatctg	tccttgacag	tggctgtcat	cttgactact	ttgttgattt	1020
gttggtattg	gggacatttt	aaaggctgag	ttatttttga	atgtcatgtt	tatgtcatag	1080
acgtagtttt	cgcatccttg	aattaaactg	ccttaactcc	ttttgtggta	taagcaaaac	1140
tacatggact	ctgtcctggt	atccttttcc	tgtgtggttg	ccccgtgtcc	tctggcctag	1200
ggttaagtgt	gcaagataac	tactcgtgag	tattcagaat	gttgttccta	ataaatgcac	1260
ttgttgtctg	tcttcttt					1278

<211> 1369

<212> DNA

<213> Homo sapiens

tatatcgcag tggaa	ggcgc tgtgggttga	ggtcgccgcc	cacctctcct	aggggaacta	60
tggagctggc agctg	aaaga ctcagtgaag	caacgaggat	gccggggaga	gggaaggggc	120
tgggctctgg gcggt	gccaa gtctgtgagg	gggcgcggtc	accgcccagg	gttcccacga	180
acgccaaggc ggcca	cgtcc tgctcccct	ggtgaagaag	ctgccctggg	cttgtcgtcc	240

tagggt	ctcc	agacatgtct	gaggtgaaga	gccggaagaa	gtcggggccc	aagggagccc	300
ctgctg	cgga	gcccgggaag	cggagcgagg	gcgggaagac	ccccgtggcc	cggagcagcg	360
gaggcg	gggg	ctgggcagac	ccccgaacgt	gcctgagcct	gctgtcgctg	gggacgtgcc	420
t gggcc	tggc	ctgtggcaga	aatctgaagc	tatcatggaa	caattgaagt	cttttcaaat	480
aattgc	tcat	ctaaagcgtc	tacaggaaga	aattaatgag	gtaaaaactt	ggtccaatag	540
gataac	tgaa	aaacaggata	tactgaacaa	cagtctgacg	acgctttctc	aagacattac	600
aaaagt	agac	caaagtacaa	cttccatggc	aaaagatgtt	ggtctcaaga	ttacaagtgt	660
aaaaac	agat	atacgacgga	tttcaggttt	agtaactgat	gtaatatcat	tgacagattc	720
tgtgca	agaa	ctagaaaata	aaatagagaa	agt agaaaaa	aatacagtaa	aaaatatagg	780
tgatct	tctt	tcaagcagta	ttgatcgaac	agcaacgctc	cgaaagacag	catctgaaaa	840
ttcaca	aaga	attaactctg	ttaagaagac	gctaaccgaa	ctaaagagtg	acttcgacaa	900
acatac	agat	agatttctaa	gcttagaagg	tgacagagcc	aaagttctga	agacagtgac	960
ttttgc	aaat	gatctaaaac	caaaggtgta	taatctaaag	aaggactttt	cccgtttaga	1020
accat t	agta	aatgatttaa	cactacgcat	tgggagattg	gttaccgact	tactacaaag	1080
agagaa	agaa	attgctttct	taagtgaaaa	aatatctaat	ttaacaatag	tccaagctga	1140
gattaa	ggat	attaaagatg	aaatagcaca	catttcagat	atgaattagt	ttgacattat	1200
tgagat	taga	ctaaggtaat	ttttttaatg	ggacctctca	tgagaagact	ggtaaatcaa	1260
aaataa	tgat	attttggagc	aaaagtcatt	ttatatttaa	tcctattttg	tacagtaaaa	1320
ataaaa	cttt	aaaacaggt t	gattttccaa	aataaatatg	ctaaaacct		1369

<211> 2551

<212> DNA

<213> Homo sapiens

<400> 4

aaacagttgc tgtggggatt gaatgactag tgcatgtgaa gctgccagtg tggtgcctgc 60 ctcggggttc atcaaaaaca ggaagtcaaa ggtctgaata ctcttcctgt gaatcaacag 120

180 agaaagcttt ctcatctgag cccatgaata cgcagcctag ggccactgac ttgtaagaat 240 ggagagttgc aagctggacc ctggggtatc agacaggcag aatcccttgc agctagagtc 300 atggaagcga agaagtttcc acaattagat gtgcctatgc aagatttgaa aagaggaaat 360 gtgacaaaag ggcagagttc tgcagctttg actacttttg ctggcatgca aggtcttgaa 420 gatgctgtgc tttcctgcag ccaaattcta ctgtatagcc acaagcttca tgaaaacctt 480 tggagtcatt ttctttggag cgggagttgg gatggtttgc tgcagacacc cagatgtttg 540 atgctatgtc cttttatctt cacctgcatg aggccgcttg atattgatct cactgcagtc 600 ctcactacat agctcattgg agtccacacc atggcttcgt acgagtgtgc acatgcagtc 660 aaaggcaccc ttaatgcctg ctgctctgcg tccttcgatg tctcctgctc agcagtccag 720 ctattacaag aggcacagag ctgagcatat tgcttcagac ccagaagaat ctcctccatc 780 ccaattgggt acaattgtga aggaaatgtg ttggaggaag tcaccttctg tgagctgctt 840 atccatcaag ttgcactctg tgtgggtgtg tatccttcct atcttggctg tcttaggtct 900 ccgtatccta ggcagtagcc gggtcagtat tccttaccat gcacatttgg gcaatagagg 960 tactggacaa tataggtaaa ttcacaacca attettteee tgcattttet ccaaatetgt 1020 ggaccaaatc ctacttaccc atggccctac aaagttgtct ttcctatcaa cactaacaca ccacaccttg tttctcctaa ccttcccaga attccttgaa ggctttctga tatttgaggc 1080 ttgacaaaat ttattcatgc attgattaag cagctaggat ttattaacca ctgtgaaaca 1140 1200 gaaattttgc caggcaatga agatatttag ttgagtaaga cagtgcttct gtattcaaga 1260 agtctacctg tgacctattt taactgtatg tttccctgaa tttggggcat tcgaatggta 1320 tgtactaaat gtcttattgg atggttcatc ctggaggagc ggctaatgga ggctggagtc 1380 aagctaggtg tetgggetea tgtetacett ettetgagta teagagggea gaetetgatg 1440 ttctcagaga tagatgttct catagtcttc ggctggagga aatgcccttg ttcatgccat 1500 ctgttgacct gtagctacca tgtagacctc tctgagggcc tgtggctcat caggagatcc 1560 gatggacacc tgaatctcag aaaaactgac ctatggcact gttgtgatgc acaggtatag 1620 gcacatetea aaacataeee gtaaatgtee caagtttgaa tatttteaaa attataaget 1680 tgtatatagc ttatatattt gcattgtaat ccatttgtac agtacctaat tcaatgcgag 1740 caattactaa tttggaaatt gtactgatat aaataattcc tctctttatt gcatgtaaca 1800 ctgtgtcagt gatataaaag ctatgtgtgt atatatatac atatatataa tatacagatg 1860 tattgaaata acttttctat ttgtaaacat aatggaatta ctgtagaata tcaccctcaa

1920 gggaaggaag aaatacatgt gagcactttc agggtagttt gcctgcatct gagcagttgt 1980 agatactttg gtggtataac tggtgatgaa gaagaaggag ggaagttgca gaggaaagaa 2040 gcttggagat gtttgggata gctttttaaa ttttcactgg agtcgattgt gctagggctt 2100 ggttttgagg atctgtgggt aaatgctgag aggggtgggt gcagttgcct aggcacaaat atctgaatag agcagatatg gatgagtggt tcaggggagg aaatattatc tgccttcttt 2160 2220 tcattctgct tcatgctagg cagggcaatg atgattggtt ttcattcagc ttgtgctcca 2280 agagtacctc agaaaatggg gagccatttt tccccagttt tggtttttag aggtttatat 2340 ccccaactgg ctatggttgg ctggcagcct ttagcttcag tgtagccaca catgatttca 2400 cgtcctctgt acattcttcg gcaggaacct gctcctttta cttccagtgg acacagagca 2460 cttcagctat gggcatccat aactacttcc tcctggatct gaggctttct tggctctgag 2520 agetteetgg ttttgetgae etcacceetg tgaggaggag gattggeeeg getgetgaaa 2551 acatacgtgt aattgaagga attctattaa g

<210> 5

<211> 1612

<212> DNA

<213> Homo sapiens

<400> 5

60 atcacataac aaccactttc cccctctaaa gaagcccctg ggagcacagc tcgccaccat 120 ggactggacc tggagggtcc tctttgtggt ggccgcatct acaggtgtcc agtcccaggt 180 gcagctgatg cagtctgggg ctgaggtgaa gaagcctggg tcctcggtta aggtctcctg 240 caagacttcc ggagccagct tcgccagcta tactatcagc tgggtgcgac aggcccctgg 300 acaaggtett gagtggatgg gaggeateat eeegtettt egtacaeeaa aetaegeaea 360 aaagttccag ggccgactca cgattaccgc ggacgattcc acgggcacag cctacatgga 420 gctgagcagc ctgagatatg aggacacggc cgtctactac tgtgcgagtt tggcatgtgg 480 tgatgattgt tctttcctgt accactacta catggccgcc tggggcagag ggaccgcggt 540 caccgtetee teageeteea ecaagggeee ateggtette eccetggeae ecteeteeaa

gagcacctct	gggggcacag	cggccctggg	ctgcctggtc	aaggactact	tccccgaacc	600
ggtgacggtg	tcgtggaact	caggcgccct	gaccagcggc	gtgcacacct	tcccggctgt	660
cctacagtcc	tcaggactct	actccctcag	cagcgtggtg	accgtgccct	ccagcagctt	720
gggcacccag	acctacatct	gcaacgtgaa	tcacaagccc	agcaacacca	aggtggacaa	780
gaaagttgag	cccaaatctt	gtgacaaaac	tcacacatgc	ccaccgtgcc	cagcacctga	840
actcctgggg	ggaccgtcag	tcttcctctt	cccccaaaa	cccaaggaca	ccctcatgat	900
ctcccggacc	cctgaggtca	catgcgtggt	ggtggacgtg	agccacgaag	accctgaggt	960
caagttcaac	tggtacgtgg	acggcgtgga	ggtgcataat	gccaagacaa	agccgcggga	1020
ggagcagtac	aacagcacgt	accgtgtggt	cagcgtcctc	accgtcctgc	accaggactg	1080
gctgaatggc	aaggagtaca	agtgcaaggt	ctccaacaaa	gccctcccag	ccccatcga	1140
gaaaaccatc	tccaaagcca	aagggcagcc	ccgagaacca	caggtgtaca	ccctgccccc	1200
atcccgggat	gagctgacca	agaaccaggt	cagcctgacc	tgcctggtca	aaggcttcta	1260
tcccagcgac	atcgccgtgg	agtgggagag	caatgggcag	ccggagaaca	actacaagac	1320
cacgcctccc	gtgctggact	ccgacggctc	cttcttcctc	tacagcaagc	tcaccgtgga	1380
caagagcagg	tggcagcagg	ggaacgtctt	ctcatgctcc	gtgatgcatg	agggtctgca	1440
caaccactac	acgcagaaga	gcctctccct	gtctccgggt	aaatgagtgc	gacggccggc	1500
aagcccccgc	tccccgggct	ctcgcggtcg	cacgaggatg	cttggcacgt	accccgtgta	1560
catacttccc	gggcgcccag	catggaaata	aagcacccag	cgctgccctg	gg	1612

<211> 2107

<212> DNA

<213> Homo sapiens

<400> 6

gtgccaactc tcttttctt tattaatata gatgtctact acttaatctt ttcaaataaa 60 cagcttgttc ttatctatat ttttgttttt cattattttt acctttatct acatttcttc 120 tgtttctagc tacttgaatt catgcctagc ttactttttg tttttcagta aatttattta 180

240 aatctataaa tttacctcta aatactgctt tagctacatc atgcaagttt taacccatgt 300 gtggtgttat gatatatgtt ttcttttttg agatgggatg gagtctcgct ctgtcaccca 360 ggctggagtg cagtggtgtg atcttggctc actgcaacct ctgcctcctg ggttcaagcg 420 atcttcctgc ctcagcctcc tcagtagctg ggactacagg ggcatgccag cacaccaggc 480 taatttttgt atttttagta gaaactaaag ttcctgggct caaacgatca atgggcctca 540 gctttctaaa gtgctgggat tacaggcgtg agccactgta tacatttaac cttatttctt 600 gcatgtacta cacgcctgat ttcaaatttt ataggccact cattttctac tctttgccca 660 agcagatgac aaggtttctg gctgttttct caggttagta aatgatgttc ctctagacct 720 atttcacata tggagcagct ttttatgacc tccagctttt tgtaagtgcc tcactaacag 780 ctcatggtgt aaggtgacca tctcctggac cccctcactg catgtatggt cattaaagcc 840 ccagetegea ggtatttagg cetettgetg eggtggattt etetatgage eeettggeet 900 cagettecat acattgacet aacttecact teeetetgtt tetggtacet ggagatttet 960 actitateta ggttttagat gatatttttg ttateatatt tttgtteagt gttttgaagt 1020 gtttggatgg gaggatgtgg tgttatgata tatactggtt tttatccatg gttcctggct 1080 cataacaccc cacagccctt gttacagttt ttgttgttat aatactgggt gtgttaggcc 1140 teagaggeag ceetetgace ttetgeeete ettteaetta eeceaaggea ggaetetaat gttccgcctg tgagagtgtt gatgcaccca atgccctgga ggaaggaatg ctgacattgt 1200 gaagetteea taaaaaceea ggaggaeegg gttgatggag ettetgaata getgaacaea 1260 gggaggttcc tggaggatgg tgcacccagg cagagcatgg aagggctgtg cccctttcct 1320 1380 catactgccc tacacatccg cttatctgta tctttcgcag tattctttat agtaaaccag 1440 taaacctaag taactttccc tgagttctgt gagctgctcc agcaaattcg ctgaacccaa 1500 agacggcgct cttgagcctc aacttgaagt gggtcagtca gaagttcctg aggctcagac ttgtgactgg catgtgggga ggggcagtct tgggaactag ccctcagcct atgggatctg 1560 1620 acactatctc agagtagata gttcattaga ggacacccag ctggtgtctg ttgcttggtg tatttggaaa aagcccccac acatttggtc acaagaagtc ttctgtgttg gtgattatta 1680 1740 tggtgtgaga gtggaggaaa aacatggtta gagagttttt cctatacaga gggatatttc 1800 tacccaatcc gtcatactga ctgaggttct taactcctaa ttaacttaat taaattaact 1860 cctaatttaa aagtttattt tgggccgggc acagtggctc acgcctgtaa tcccagaact 1920 ttgggaggct gaggcggca gatagcttga ggttggggag ttcaagacca gcctggccaa

catggtgaag ccctgtctct gctaagagtg caaagattag ctgggcatgg tgttgtatga 1980 ctataatccc agcactcagg aggctgaggc aggacagtca cttgaaccta agctggggcg 2040 gaggttgaag tgagctgaga tcctgctact gcaccccagc ctgggagaca gtgtgagact 2100 ccatctc 2107

<210> 7

<211> 2352

<212> DNA

<213> Homo sapiens

<400> 7

60 ttgtttggaa ttaaacttct agcaatcatt tacctttatg gttctcttaa cttcaggtca 120 cactgttgtt tagtcaatgt gagaatcttt cagatgttct gcactttgca aaaggatatt 180 cacagecaat gtgtgeggea gtgaaggaca ettgttgatt eettatttat tgtetgetgt 240 tccagggacc ggggactaga ggtgaataaa gccttgtttg ggctgtctag gatgttgtga tcgacacagg aaacagacat gaaagccaaa ttggcgcagt gggtgaagta ttgtaatact 300 360 ggtctctgtt tatgatatat ggaagaagtt tcctagtagc agggtgggtg agagagtcca 420 tcatcattgc agattggtgc ctctgtggac atgcaggtat gttaggccag aggtggggag 480 540 600 ggagagagac agagagaga agagagagag aggttttgaa agcattgata tggggtctac 660 atattccccc cggcccccat tccctattat catagaagca tgctgccctc caaggctttt 720 gaatttgcca ccgtgaagag catgcatgga atcttcggct gtggccttgc attgccccct 780 gtcttcacag cggagcttct ttatctgacc cgtgcatgtg cctctgatga gcagcccttc 840 atcacagete tgeggeetee teetaggeee eegeetteag eteteeagtt eattteeege 900 cttgttccca ttgccacctg cgggcttgga gggccacctg acattctgtc ctttgggtcc 960 cctgtgactc cagagetect teeettetgg ggegeecaca tetgegacae aettgtttge 1020 ccagtgcatt ttctacactt agagttcctc tcgtgctctc atatttccat ttaaagccct

ctcgagaggt	ctgtctcctg	ccagcagcat	tccttctagt	ttactagaac	tccatttctc	1080
atcctgccag	gaatccagcc	gtggagtgag	cttcagcaag	cctctctgca	gtctcttgtc	1140
tgctccaaaa	ctgtggcctc	tggttgtgag	aaatgggcat	cctgagtcag	tgagagcagt	1200
agttagcttg	cagcagcttc	ccctctcccc	ctgagtgagc	ctttcttcct	cttcctcctc	1260
tttcattcag	cctcatcctg	cgttgggtcc	atttgacaga	taatggcacc	ttgaggcctt	1320
gtcttttgca	tggcatctgt	gcctgactgg	tcagaaatta	cttgtgaagc	aacatagggg	1380
gttgttggtt	gggtccactt	ttaggatgaa	gtcagaaggg	atcgtgagtg	atgcttggcc	1440
aataagaatg	tattgatttg	atttactaat	taatttcatt	tccagacacc	aatatatgca	1500
tagccttgtt	tgaagaaaat	taaggagaac	cattttgtaa	atggcaatga	gtgtaagaca	1560
cttaactatc	ttcctgctct	ccctggcgtg	ggcttccgcg	ctccctgact	ctgcttttat	1620
taaaggtgtc	tgggaaggca	tttgtccttc	ggcttcccag	ctggcttctt	gccttctcac	1680
tcactgcctc	ccgtagcctg	tgggcagaat	ccctcaccgt	gcccaccttg	ccctgctctc	1740
gtctgacctc	acctctgttt	ccaggatttg	ctatggctgt	cccctgccag	tcatgctctg	1800
tgcttgctac	tctgagtgtg	tccctggtcc	cactctcttg	cagcctctgt	gtcttagcac	1860
atgctgccct	gatggcccaa	gggcccttcc	cctttgtttc	tgtctgggga	atgttctgtc	1920
tcctctttct	tgaacctcct	tatattccct	caagaagact	taaggcaaaa	acaaacctga	1980
acttactatg	tgtggtattt	ttgtgttata	agtgtaggac	ctagtcatag	taacacattt	2040
caaaaatatg	gaaccgtata	aagaaaatga	gcatcactca	taaatcacta	tttagacaca	2100
agcattgttt	acgtttctaa	tattctttct	ttagtggtgc	ttttcatgat	tttatgtgca	2160
tttgcatttt	actgactaaa	tattactata	caaacatttt	catatcttgc	cacttcacct	2220
aacaatacag	cacaagcagc	ttctcatggc	attaagaatt	gtttgtggcg	tgaacccggg	2280
aggcggagct	tgcagtgagc	cgagatcgcg	ccactgcact	ccagcctggg	cgacagagcg	2340
agactccgtc	tc					2352

<211> 2400

<212> DNA

<213> Homo sapiens

acttgcttat	gctttggtgg	cgttgctact	tggagtggtc	tttaaggtgt	aaacctcagg	60
ccactctgcc	ttctcccaga	gcaaggacag	agagatggcc	gtagcccact	gcctagcgtg	120
ggcctcacac	attgatacca	tgcagtaatc	agtatatgtt	ttttgcatga	tgagtacatg	180
catgtacaag	cagggactgc	acgttagttt	gccattttaa	taagataact	ccttattggg	240
gaaatatcgc	ttgtaaagct	tagaagaaat	ggaaatatca	cttggagcaa	ttttaaagca	300
cgtggtaaaa	tcatgaagag	aggctaccct	catccctctg	agggcctctc	tgtgggtctg	360
caagcaccac	tcgccagctg	tctcctggtg	ggaacatcag	gtgcagccca	ctgtcaggtg	420
cagctgtctc	ggccctgctg	tgtctggggt	cagtgggcac	tggagtcatc	ttcgcagact	480
gcacctggag	ctgtgcccct	tagcctcctg	ctcctgcccc	gacccagatg	cagcctcagc	540
gtcctgcagc	acagagctct	cgactgtccc	tgcccagcag	ggggcgccgg	gcagcactgg	600
tcccactccc	tcaggtggtg	tcactcctca	cccgaggagc	tgagttccag	gcacagaatt	660
cctcctgtca	ccatagggag	acaągacaca	caggacttgg	gtggctgtgg	aacatcagaa	720
agaaggggct	aatattgcat	gaccgttgcc	taaaatgcag	tgtgaaaatt	gccatgcctt	780
cagctcgaaa	tcagccaccc	ccagcatcac	ttcagcaagt	ggagaagagc	agggctgact	840
gaatgcctct	agggatccac	actctgttcc	ccagtacatt	ctccttcgga	ggttccccca	900
gctcctcggt	gatggtctcc	ttggagcttg	agticttccc	atcctctcct	acccccatc	960
agagtgtaga	ccgattccag	cctccacaag	ggccccaccc	tccaaagccc	agcctcggta	1020
ttccgcagtg	actgcccagt	ggtaggtgcg	gcaggacatg	taagggaaaa	gtcacccaag	1080
aacgaggggc	agatetegee	agaaggggca	caggtgtgtg	tccatgtctg	caggagagga	1140
caacgggctc	agccacttct	gcctggcagg	gccaggtgct	ccctgtcact	aggctctgtg	1200
cagatggccc	tgcaaagaaa	caccccattg	tccacctgag	aagcagacac	ctgtggggcc	1260
gtctcctcgt	ctggggcacc	cagggtcccg	agtggcccat	cctccctccc	tgggctcggt	1320
tcattttgtt	ttggagagtg	gttaatctca	gtgtcacacc	cggtaccacc	gcacgtccca	1380
gtgcacgcca	catgtcacct	ctcaggacaa	tgggacagct	ttatcaagag	tatttcaatt	1440
ссаааасссс	tcagttaggc	acggctttgc	tcgaggaaca	atctgattct	gggaaaaggt	1500
tatctgcatc	ttctaagagt	gttaccacga	taccaggaat	acaaagatga	gtttgagcat	1560
catcctttcg	ggaaatgtaa	atacctaaag	caaaggattc	tagggcaact	gtttttcttc	1620

1680 cccattatca actccataaa gagtcttttc tgacttcttt ttcaattgtc ccctcctggc 1740 cttttaataa catagatatg ctgtgtatct gtttatgttc tatatgtgta cttagacttt 1800 gtttagaaaa gagtaagatt tttccacctc caagaaccag tgatcactcc cttgagggct 1860 ctgtcacccc tgtggagaat gcagcacggt caggcatgta aaagggtctc ttaccgggtc 1920 ctctttcagg tggtggactt agattagtag ataatccttc ctgggccacg ggcctcatga 1980 ctggtcagta gtgttgccag atttcacaaa ctgtatatat agaatgtcca gttaaacttg 2040 aatttcagac aaacaaatcc ttttttaagt aaaagtatgt cctatgccat atttagacat 2100 cgtttgttgt atctggcaat gctacttgta aggatcctac tcttctgagg atagaaagtg 2160 cacttcccat taagtaagaa ttttcattaa caggaagaac gtgagcctcc atttaatagg 2220 ctgggcaaaa ggatgccaaa tgacttttga tgtagttttt attttcatga gcttatttca 2280 acaaaggatg ttaaaaacag ccaaacatca gcagggcgca gtggctcaca tctgtaatcc 2340 cagtactttc ggaggccgag gcgggtggat gatttgagtc caggagttcg tgaccagcct 2400 gggcaacgtg gcaaaaccct gtctctataa aaaaataaaa taaaacagtc aaacatttgc

<210> 9

<211> 2463

<212> DNA

<213> Homo sapiens

<400> 9

60 gggatgtgtg ctgagaccca gagtcaccca ggggtctccg tcacgtgcca ggagtaggca 120 gaagtgggct gtgacagatc aggaaacaga gctcagtgca gcccactaaa ttgctcaggg 180 ccctacagct aacaagcggc agaggcagga tctgcactca ggagctgctt ggagatgctg 240 ctgtggccac tgctgctgct gctgctgctg ctgccaacat tggccctgct caggcagcag 300 cggtcccagg atgccaggct gtcctggctt gctggcctcc agcaccgagt gtcatggggg 360 gccctggtct gggcagccac ctcagcggcg gaggctggag cagagcacgc tccatgtgca 420 cccctggaac caaggaccct agggccctgc tgctggacgc actgaggtcc ccgacctcaa 480 accaggacct tggggaggcc tctctgcagg ccaccttgct gggtctggca gccctaaaca

540 aggectacce agaagtgetg geteagggae geactgeeeg tgtgaegett acateceett 600 ggcccgacc cctgccttgg cctgggaata ccctgggcca ggtgggcacc cctggaacca 660 aggccctgag gtggtgtcta cagggagccc agcgccccca ctgttccctc agaaggagca 720 cagacataag caccttccgg aatcatctcc ctctgaccaa ggccagccag acccagcagg 780 aagacagtgg agagcagcca ctgcccccga cctcaaacca gggctgaggg cactggaggc 840 tgggacggct gtcgaacttc tggatgtttt cttgggcctg gagactgatg gtgaagagct 900 agctggggcg atagctgccg ggaaccctgg agcgcctctc cgtgaacggg cagctgagct 960 ccgggaggcc ctagagcagg ggccacgggg actggccctt cggctctggc caaagctgca 1020 ggtggtggtg actctggatg caggaggcca ggccgaggct gtggctgccc tcggggcctt 1080 gtggtgccaa ggactagcct tcttctctcc tgcttatgct gcctcgggag gggtgctggg 1140 cctaaaccta cagccagage agccccatgg gctctacctt ctgccccctg gggccccctt 1200 tatcgagctg ctcccagtca aggaaggcac ccaggaggaa gctgcctcca ccctcctttt 1260 ggccgaggcc cagcagggca aggagtatga gctggtgctg acggaccgcg ccagcctcac 1320 caggtgccgc ctgggtgatg tggtgcgagt ggttggtgcc tacaatcagt gtccagtcgt 1380 caggttcatc tgcaggtagg tgaccccggg gagctgaagg gccatccttg tgtcctgggc 1440 tecaetgeet etecetteet eetetteagg etggaceaga eeetgagtgt gegagggaa gatattggtg aagacctgtt ctctgaggcc ctgggccggg cagtggggca gtgggcgggg 1500 gccaagctgc tggaccatgg ctgtgtggag agcagcattc tggattcctc tgcgggctct 1560 gctccccact acgaggtgtt tgtggcgctg agggggctga ggaatctgtc agaggaaaat 1620 1680 cgagacaagc tggaccactg ccttcaggaa gcctctcccc gctacaagtc cctgcggttc 1740 tggggcagcg tgggccctgc cagagtccac ctggtggggc agggagcctt ccgagcactc 1800 egggeagece tegetgeetg eccetectee ecetteece etgegatgee eegggteett 1860 cggcacaggc acctggccca gtgtctgcag gagagggtgg tgtcctgagt caagtcctgc 1920 cccaccgccc agctccccc agaggccacc tcgccctcc ctctgggacc tctccggatg 1980 gggagtcctt ggccagggtc tctgactctg tgtcacctga catttgccca tgagagccgc 2040 tgggccttag agaggccttg gcccagctga ccggttctga agtatgggcc tccggggtta 2100 gcagatgcca gcagtgcctg cccgtgtccc catgtcccgg catgaaggac actgctagag 2160 agttaccatg cacaccgatg gtttcctgta tcacagccca aagaggttct ctggtggcca 2220 cagctgtgtg ctcagtcagt gcactgggca agctagaagt gttggggggt taatgtcccc

aggagcagca accetgagte aataaggage aggaceteag etteattgte ettgageagg 2280
acaattetga agtgtattet acataaacte teagaggatg eecageagga tggagteeca 2340
gttgeegea geagtaacee acteatteat gtaetteetg egggggetet eeetteeete 2400
tetteeeac teeecegeet tgggetteet gggatggete eeaaataaac etettgeace 2460
cag 2463

<210> 10

<211> 1650

<212> DNA

<213> Homo sapiens

<400> 10

60 actgccactc tcatcttgtg atgtgcctgc tctcccttca cctcctgcca tgattgtaag 120 cctgctgagg tctttgccag aagcagatgc tggcaccatg cttcctgtac agcctgcaga 180 actgggatat cattttcaat gcccaatacc cagaactgcc tcccgatttt atctttggag 240 aagatgctga attcctgcca gacccctcag ctttgcagaa tcttgcctcc tggaatcctt 300 caaatcctga atgtctctta cttgtggtga aggaacttgt gcaacaatat caccaattcc 360 aatgtagccg cctccgggag agctcccgcc tcatgtttga ataccagaca ttactggagg 420 agccacagta tggagagaac atggaaattt atgctgggaa aaaaaacaac tggaatcttg 480 cctcctggaa tccttcaaat cctgaatgtc tcttacttgt ggtgaaggaa cttgtgcaac 540 aatatcacca attccaatgt agccgcctcc gggagagctc ccgcctcatg tttgaatacc 600 agacattact ggaggagcca cagtatggag agaacatgga aatttatgct gggaaaaaaa 660 acaactggac tggtgaattt tcagctcgtt tccttttgaa gctgcccgta gatttcagca 720 atatccccac ataccttctc aaggatgtaa atgaagaccc tggagaagat gtggccctcc 780 tctctgttag ttttgaggac actgaagcca cccaggtgta ccccaagctg tacttgtcac 840 ctcgaattga gcatgcactt ggaggctcct cagctcttca tatcccagct tttccaggag 900 gaggatgtct cattgattac gttcctcaag tatgccacct gctcaccaac aaggtgcagt 960 acgtgattca agggtatcac aaaagaagag agtatattgc tgcttttctc agtcactttg

gcacaggtgt	cgtggaatat	gatgcagaag	gctttacaaa	actcactctg	ctgctgatgt	1020
ggaaagattt	ttgttttctt	gtacacattg	acctgcctct	gtttttccct	cgagaccagc	1080
caactctcac	atttcagtcc	gtttatcact	ttaccaacag	tggacagctt	tactcccagg	1140
cccaaaaaaaa	ttatccgtac	agccccagat	gggatggaaa	tgaaatggcc	aaaagagcaa	1200
aggcttattt	caaaaccttt	gtccctcagt	tccaggaggc	agcatttgcc	aatggaaagc	1260
tctaggaaac	accagtcttg	agaggtggcc	agccagactg	cctgtccaca	tgcgtgtcag	1320
cacatacagc	cgcttcctgg	aagccgcctg	gaatgtcttc	acggcagcgt	tttgctcaca	1380
cagcagcttt	tgcacgcccc	aggcagcccc	gactgctgaa	atccaacttg	agctggctgg	1440
tggtccctgg	atcctagagc	ccttcacttc	gggttactcc	ctctttcttg	cctctatttc	1500
ttagttggaa	gaaataaact	cacaaattat	ggtgcagtaa	ttttccgggg	aaagtaaagc	1560
ctcaggaatg	cccacgcctt	tcttccaaag	cctttgtctc	tgagacctct	taagttctaa	1620
gattaaatgc	ccctcgctgt	tcttcctctg				1650

<211> 1590

<212> DNA

<213> Homo sapiens

<400> 11

60 gagaagaaac agggcttgga ggaggcaaga ctgttcagca tgaattagaa ctgatttatg 120 agcttgctgt agcacttgga atagaaaaac tcttcagcgc ctttgatccc tctcacacta 180 caccagggtt cgattgagaa aacaacagcg ctgaccaccc gtccttctcg atccttgggg 240 aaaaaacttt tttggacggt agagtcagat gaggccgcat tttccaccag ggaacactaa 300 ctgctgcggg aagatcccag cttctggcta aagctggggc ggtaggagct gccggccagc 360 tegecateta gtecceagag ecegggettt agggegeeeg gatgeaaace agttttgeeg 420 ccaaggaacc cggacaggcg cgcctcctcc ccggcctcgc aaggaacagg ttaaggagac 480 atttcccact ttctctgccc ggccctgaac gctcgccgcc cctgcccagc cgcccactgt ctggcagcct gcaagtctcc attcagaagc ggctccgtgc tgcccagcga tggcgccctg 540

gcggcgcgga	agcccgcggc	caaatgacac	gacttggggg	caaaggagga	caacagttcc	600
caccaggaca	aaaaataata	tccaaagata	ttttggcact	aacggcgcta	tctgtagcaa	660
gaaagttgag	cagtgtgaac	tgttgagact	tccaaggaga	cttcagacaa	ccaagacagt	720
gtaaaggaaa	acagagaaaa	agacttgtta	gacattatta	agggcacgaa	agttgaattg	780
agcacagtaa	atgtacaaac	aacaaagcca	cccaacagaa	gttcacttaa	aagctacaac	840
tggcgggcct	caaagagctt	taggacatgc	tccaaagaag	agaaatgagc	ccctgagtcc	900
tgagttggtg	gcagctgcat	ctgctgctct	gttttgacaa	gcaaacaagc	cagaactgct	960
caggcagctc	cgtagcatga	ggaagagtca	ggggcacaga	gagatggaga	gagacctagt	1020
tagtttcaat	aacaaaatat	cagatatgaa	aattgccagg	tgtgctacag	ctagaattaa	1080
tataaggcca	gagcatcaga	ttcagtttga	ccaaggctat	gacaattatc	ctggcctgga	1140
gaagactgct	gatcttagaa	acaggtatca	ggctttgtag	tctgctgggt	tttgtttgta	1200
tagtttggtt	ttaccttgac	tgtagattta	ccttattgtg	ggtgtgtatg	attgctgttg	1260
gatatgtgag	cattatgaat	gcatttacat	ctgtgttctt	actctctgta	taccacttcc	1320
tagagaggga	accatgtgct	ggagttagcc	agtcctgcat	ttttctatac	cttaaatçaa	1380
aataggccat	gcttcatatc	tacccatgat	gaatagggtt	cctttgattt	agaataaata	1440
gagctgactg	aattctgaac	aagtgagtat	tttgtaagaa	acattatttt	tcattttaaa	1500
tatcaatgcc	taatactgtg	tattcattta	ccctttatat	ctctatacat	gcttatcttt	1560
tgttacacct	tagagaaatg	acccaccatc				1590

<211> 3306

<212> DNA

<213> Homo sapiens

<400> 12

ggagcctcca ttccctgcct tggtaccaaa gtcttgcttg gtagcagaat cagctgtcag 60 caagctcctg ctttcagcct ctgagttcca ggttcgtgga ttggatgagc tggatggtgt 120 gaaagcagca tgccctgcc cacagagcag cccccagaa cagaaagagg ctgagccaga 180

240 gaagaggcca aagaaagtct cacagattcg catccggaaa accattccta ggccagatcc 300 360 agaagagata tataccaaca agaattataa atctcctcct gcaaacaggt gtttagagac 420 catctttgag gaacccaagg aacgaaatgg tacactaatc tcaatcagcc aacagaagag 480 gaagcgagtt ctagaatttc aggattttac agtcccgcga aagaggagag ctcgaggcaa 540 agtcaaggtg gcaggcagct ttaccagggc ccagaaggca gctgtgcaga gtcgagagct 600 ggatgctctt ttgatacaga aactaatgga actggagacc ttctttgcca aggaagagga 660 gcaggaacaa tcatcaggct gttgagaagc gattcagttt gagggtctca attttagggt 720 780 cctaattttg ccctaccgcc aaaccactca aaaatgcaca gtccatgaat ttttacctat 840 ttcaaggtgc aaccttttta gaaactggtg aaggaggtc ctctactttt actgctgagt 900 atagaacctc aggaatgctc cctttctcct ggaaatggac ctgaacgaca tccagccacc 960 tecteagtet etgecateca eaggaggaag eageageeta tetteagtaa eaetaggatt 1020 ccaaggacac acaggatttg cacgtccata tgaaagttcc gctttgttta cggtggtgct 1080 agaccaagat tattagaaac gtggcctagg gagggggacc tggcgtcctg tcctgtgtgg 1140 tctcactggc tcatttcagt agttgaggaa agatgagctg ttgtgttttc ttatcttttg 1200 1260 cccatcgttt tctcccctct gtgactgggt cactagtgcc agaggagccc gtccaggccc cattcgaagt aagttgcact ttttaatgtt gtggtgtgga ttattttcat ttgttttatt 1320 1380 ttcttttttg ttgttgtttt tgtactatta ttgctgcatg tgtggagcct ttaaatgtga 1440 ttttaaaaca ttttttaag gagaaaaaca atacatgtct taagaataca tgataggcat 1500 ttgacccagt tgatcgctgc atggaagaga catttttcct atccatgtgt ttcaggcaat cccttcccca tctccagctt ctagtgtaac tcattagagg gagcactttt tttcatctgg 1560 1620 gttctcattc ttgcccacca aatacatgta tttattttag tgatttaagt aagagcaggt 1680 ttctctcccg atcattgaaa aactactatg gttgggtgtg gtcttaatgg tttttatctg aaatggtgtt aggtaacaaa attgagtaca acggcttggg cagtgataca ggctgaccca 1740 1800 cagtatttgt ggctttccag gcagcccgct tcaagtgtgg ggagagagtc ggggtcatgt 1860 ttcagaccca gagatgtgtt cctgcagtgg gatctcaaaa atccccagcc agccttcttt 1920 gagggccacc tcattgtact ctgggctcct atgtcacatc taccggaact gtcaaatgct

1980 ggagttagcc gagtttctgg gtttgtgcct gcaggagtct gtgggcagag ggatgctgtg 2040 ggtcagcagc ctcgaggtct tgttcctttt ccactgaagt cctgtgtgtc catatcctgc 2100 teceetteee eteettetet aggggtttet ettetetet caaaacaaga gtttagagaa ttaacattcc atggctagtg agtgggatgc aaaagtcatc gtcaggacac cagcatcacc 2160 2220 tettettate eteetgggag ecaetggeat ggageageeg eegatgggaa eegteagagt 2280 tctagggaca tttccaagtc agtctattag agaagagtga gtggcacgtc ctggaatgtt 2340 ggccaactct cctaggtttc ttttgcttcc ccatttgcta gtggatgggg agatgggttg 2400 ggggtggggg gtctctatgt gccttgcttt tgcaggttga cagtctatgc cacactggag 2460 cagaaaaact gacatgagcc agagggaaaa gtgtgccacg gctatgttct aggcccactg 2520 cctcagacat agcattgaga cgagtgaaat acacacttgg tcatccacgg aggcttccaa 2580 ggccgcggtg cagccaatga atgcacggcc gtcgctccgt ctccaggctg gaattccgtc 2640 tcataatcaa tgccatgtac attaagatct gcgaaagacc aacttttagg cagtgatact 2700 tttctcccat tccctggggt gggggggta tgcagttggt gctttctgta attcccttgt 2760 tetgttttgt ttetgtaage tttteeeetg gtgteatgga agggaettet taaataacea cattgtgggt ggctgtatcc aaagtttaaa taattggcca gaagtgcaga gtatcctttc 2820 ctggattcgt gtcagaaaag ggctccttgc cacaactgaa cttactgtat aaaaacctgg 2880 ctagggagat ttaattttac taaaattaca gtttaatgtt accgtctagc cacaaatcaa 2940 gcagcaaaag ctattttgat gatgaaaggg ggtccccgtt gagctggtca tctagtgcag 3000 tgtgctctca gattccatgt ttgttgattg tgtgtcttca caagcccctc tctggtgctg 3060 3120 aattggattt gaattettgg tgagaggeet eageatetee ttgggetggt etgggeeagt aaaaatagct gcctgacatg tttatatatt atcatggtca gtagttcaat gaaatttgta 3180 3240 catttttggt aacattggta tacatgatgc ccctgcagtt ccttttctgt ttggtagttt gtgactctaa gatttccact gttatgtgtg ttaatttatg aaaataaatt tttttgaaaa 3300 3306 cctttc

<210> 13

<211> 2317

<212> DNA

<213> Homo sapiens

60	cctctgggtt	gaagcccagt	cctattgaag	tgcggagtgg	gcgcagccca	agaactgaac
120	tgggcggttc	tttattgtgt	atccccaaat	ccgccttttg	aggccccctc	ttagagattt
180	tggaagtggc	atttggggct	agtcccagcg	tttagcaaca	gaggtaaaga	taggggacgt
240	atcatctgta	gagtttcaga	caacaatacg	ggaaaaaacgc	cggcgactta	caggaagaat
300	taagagatgc	aagaaataca	aattagcaac	cacccaaggg	aatccagagg	agaggcctgg
360	agaaagacta	aacctacttg	ccaccatctg	accttctttg	tacctgtttg	caaaggccag
420	ttacaaagtc	tggctggaat	gcagcggcat	acccagataa	cgctttgtag	ttttggtatc
480	tgaagtttta	tgcttccgtg	attcaccatg	cccagcctcc	caattgagat	tgtggtgaaa
540	tcctgcagat	tatttagtct	aataaccagg	tgaaagaaga	cctgctgctc	tcctgcagac
600	ccttgttagc	tcggatgctg	ctgtaaaaca	gccgactcct	ctctaccatg	caaaagggat
660	ctgaaggcta	gggaaacacc	ttatgactca	agattgggga	cttcaagcgg	agcttacatc
720	aaattgctga	ctggaaagga	ttcagagaag	tccctaaaca	ttccagtttt	cagctccaag
780	acttcttaag	tcagagctga	accagcaaca	gtggtcaaac	acggaactga	gattcacaag
840	acgtgtcagg	ccatgtaagg	ggatcctcac	catatggagt	acattggaaa	aaaagcacag
900	gaaacaagag	gttcttcaag	tgggtttgtt	tcactccttt	tttctggcct	aaatgctgca
960	agactttcta	tttgaaggaa	caagctgaaa	atgaggtgac	attaaatgga	ggtccacttc
1020	cgtgtaagca	actcctgaag	ttttgctcca	ttcttacata	aagaaaatta	tttatacgaa
1080	caagccaagt	ctggagaagt	cttctacaag	agaaccaagc	tgtggaatcg	cctctggaaa
1140	acagtggccg	cggttccgat	taaagggagc	atttattctt	tccagcagca	ccgcacagtg
1200	cggaaataca	cgggagccac	taagatcaaa	aatcaagtgc	gaagtcatgg	agttgcaaag
1260	caaggctgag	acccatggcc	tccctccata	gccggagctg	atggttccca	cagagcaggg
1320	gcctagagtc	atcatggaag	tcácatctcc	gaagagctgt	aggacccgca	cagcgtcccc
1380	acaccttcct	tcccatgggg	gcgttccact	ccacaccagt	agtgcccatt	cttacgggac
1440	ttgcagacga	gtagctgtga	caatgagcga	ggacagatag	agaagcagcc	gcctcacgtg
1500	gcctggagct	gctgagcaca	caccctgtg	gcgtgctgcc	cctgcagaca	ggcctacagc
1560	agaaggaatc	attgaggagt	cacctgcagc	tcaatggagc	tcccggcaga	gatgttgctt

1620 tgaagccagc accccaactg ctacagaggt ggaggccctt gggggagagc tgagggccct 1680 gtgtcagggg cacagcgggc ccgaggagga acaggcgatg gtttgcctgc aaaatccgct 1740 cagtggtgag cctgctcatt gacacctgag aaggcatgac tcctcccaaa aactagccag 1800 gtggaccaag gaacccggct acccattccc agcaatggga cccatcgcgg aaccatcggc 1860 acatatacca agtectecte teatgactea aagtecaetg cageetagga gggtgtttee 1920 cagaagaaga atggataggc tcatgccctg tctaaacaaa ctgggaaaac tcattttctt 1980 cagaagttat ttcaagaaag gctcagcgac tctgtttctc atctttccaa tttgcaggat 2040 aatttttggt tttgaatttt gatttttcat agatgtatat tattttgaag tatcaaataa 2100 aaataattta ttttactatt actgattatt gcagtagtat cacctagcag aggggacact 2160 agttgaaaac tagagagctg ctgtcctctg tattctgcag gagcttttcc tgctggtgcc 2220 actgggttcc agtagactca tcactgcagc ctcagcaggg caggccaggg atctggacaa 2280 tggggactgt ttagtttttt gtttgttttt tttgccagcc agaactttta aaaaagtaaa 2317 catccatgta gaatgattaa atggaaagtt gcttctt

<210> 14

<211> 1965

<212> DNA

<213> Homo sapiens

<400> 14

60 taagaaaagc ccagcgaagc tgggtacaga aagtcactgg ggaccatcaa gagacccgta 120 gggagaacgg tgagggtggc agttgcagcc catttccttc cccagaacct aaagaccctt 180 cttgtcggca tcagccgtac tttccagata tggacagcag tgctgtggtg aaggggacga 240 actctcatgt gcctgattgc cacactaaag gaagctcttt cttgggcaag gagcttagtt 300 tagacgaagc attccctgac caacagaatg gcagtgccac aaacgcctgg gaccagtcat 360 cctgttcttc tcctaagtgg gagtgtacag agctgattca tgacatcccc ttaccagaac 420 atcgttctaa taccatgttc atttcagaaa ctgaaagaga aattatgact ctgggtcagg 480 aaaatcagac aagttetgte agtgatgaca gagtaaaact gteagtgtet ggagcagata

catctgtgag	tagcgtagat	gggcctgtgt	cccaaaaggc	tgttcaaaat	gagaactcat	540
accagatgga	ggaggatgga	tctctcaagc	agagcattct	tagttctgag	ttgctggacc	600
acccttactg	taaaagtcca	ctggaggctc	ccttggtgtg	cagtggactc	aaactagaaa	660
atcaagtagg	aggtggaaag	aacagtcaga	aagcctctcc	agtggatgat	gaacagctgt	720
cagtctgtct	ttctggattc	ctagatgagg	ttatgaagaa	gtatggcagt	ttggttccac	780
tcagtgaaaa	agaagtcctt	ggaagattaa	aagatgtctt	taatgaagac	ttttctaata	840
gaaaaccatt	tatcaatagg	gaaataacaa	actatcgggc	cagacatcaa	aaatgtaact	900
tccgtatctt	ctataataaa	cacatgctgg	atatggacga	cctggcgact	ctggatggtc	960
agaactggct	gaatgaccag	gtcattaata	tgtatggtga	gctgataatg	gatgcagtcc	1020
cagacaaagt	tcacttcttc	aacagctttt	ttcatagaca	gctggtaacc	aaaggatata	1080
atggagtaaa	aagatggact	aaaaaggtgg	atttgtttaa	aaagagtctt	ctgttgattc	1140
ctattcacct	ggaagtccac	tggtctctca	ttactgtgac	actctctaat	cgaattattt	1200
cattttatga	ttcccaaggc	attcatttta	agttttgtgt	agagaatata	agaaagtatt	1260
tgctgactga	agccagagaa	aaaaatagac	ctgaatttct	tcagggttgg	cagactgctg	1320
ttacgaagtg	tattccacaa	cagaaaaaacg	acagtgactg	tggagtcttt	gtgctccagt	1380
actgcaagtg	cctcgcctta	gagcagcctt	tccagttttc	acaagaagac	atgccccgag	1440
tgcggaagag	gatttacaag	gagctatgtg	agtgccggct	catggactga	aactcagcag	1500
ggactctggg	aagtctgacc	aagttggagc	agatggtttg	ttacttgaat	ctccaaacac	1560
ttagttgaat	ttttacagat	atttcagatc	agtggtgttg	ggccactatt	gttacctcaa	1620
atttattttt	tgcccttatt	catttctcca	gctaccatgt	actattgttt	aatgttcagt	1680
ttggtttcat	ttttaatttt	atggttctgt	gcgtcccca	tatttaatat	ttattattca	1740
aacgcatgca	tatagacaga	gcatgcagtg	aagagtatta	aaaaaaaaag	cttagtagat	1800
ttgggcagct	ctctctcggc	gttgattttc	ttacaggaac	aattctgtct	cttctgcatg	1860
ccaggttctg	tcactgagga	actgaaacac	ttcctcactc	tgaagtacaa	gacattttga	1920
actgacagcc	cagtgactgg	ctactttggt	ataccacacc	cccac		1965

<211> 2281

<212> DNA

<213> Homo sapiens

aattcccct	cgggtcaccc	gggacctgga	gctggaaatt	tcacggatca	gggttcccta	60
agacccttgg	aagaggggac	gatcgcccca	agttagaaat	ccttctgcca	gctcataagc	120
gtggttcaat	ttaaactagg	gttttggccc	cttgacccca	accaagcccc	gccccttcct	180
ggttgtctta	gcgacggcgg	tggcgtccca	agatggcgtc	gtggctgccg	gagactctct	240
ttgaaactgt	aggacaaggc	ccgccgccta	gcaaagacta	ttaccagtta	ctggtcaccc	300
ggtctcagaa	aaattgagtt	tacatagccg	ggcgcagtgg	cttacgcctg	taatcccagc	360
actttgggag	gccgagccag	gtggatcacg	acgtctggag	ttggagacca	gcctgacaaa	420
catggtaatc	tttagatggt	ggaagatctc	tctaaggagt	gagtatcgat	caacaaaacc	480
tggagaagca	aaagaaaccc	atgaagactt	cctagagaat	tcacatcttc	aaggtcaaac	540
tgccttaata	tttggtgcaa	gaatattaga	ctatgtcatc	aatttgtgca	aaggtaaatt	600
tgacttcctt	gaacggctct	cagacgattt	gctcctgact	atcatttctt	atctggatct	660
tgaagatatt	gccaggcttt	gtcaaacatc	acacagattt	gcaaagctgt	gcatgtctga	720
taaactgtgg	gaacagatag	tccagtcgac	ctgcgacacc	atcactcctg	acgtgagggc	780
cctggcggag	gacacaggct	ggagacagct	gttcttcacc	aacaagctcc	agctccagcg	840
gcagctccgc	aagaggaaac	aaaaatatgg	aaacctgaga	gaaaagcaac	cttaggcaca	900
cattttccta	ccagcaggga	gctcaggcat	ggctgtgttt	ctcttcagtg	tccaaatctc	960
ttctgtctcc	ttttcttaag	aactaagagg	ttttgttgat	gcgtggagcc	atttgaaact	1020
cgtaggggat	ttgcacacaa	atgcagcaga	gtctggctcc	ccagtgcctt	gctagagtca	1080
ccgtcattct	gaggtcaaat	catggcccga	ggacaagggc	tgtaagacag	ggagccccat	1140
aggccatcat	catccttatc	ccacacccat	tataaaagag	gtttctattg	tatataaaca	1200
aacaataaat	gattattagc	aggtttttat	tagacatcta	ttttatctag	gcattagaaa	1260
gggtaatggg	gcttttgaat	tttttcctgg	cattgtgtcg	tctgcgtcca	gccatgaagc	1320
tggtggctga	gtgtccccac	caggaactgt	gaagggcacg	taccacggga	ggcactcagg	1380
gtgggtgcag	ctgccttccc	aactttgttc	tgctaagtcc	atattcaggg	ccctatcctt	1440
gtgagcccag	gatgccaggg	tccatccccg	catgtagaca	gcttccgacc	tggtgctgga	1500

gcatgactgg	agaagtgcag	gcatcctgct	tgcggacctt	gctcaaagta	caacttccca	1560
ggactacttc	acattgttaa	ataaacctat	aaacatttct	tttcttttct	tttttttt	1620
tttttttgt	attttctttt	tagtagaggt	ggagtttcgc	catgtaggcc	aggctggtct	1680
tgaactcctg	acctcaagtg	atctacctgc	tctggcttcc	aaagtgctgg	gattacaggc	1740
atgagccact	atgtctggct	aaaacctata	aacatttctt	agagaaatgc	tgttccccaa	1800
aggaatgtga	acagctacca	cttttaacaa	ggatatttaa	gaaaacagac	tatgagttaa	1860
ctaagtaaaa	atgtaaatat	ggtttgcatg	ctgttaacat	ggcagagggg	taaaaagaat	1920
acagtcctgg	ggagaaaggt	cacttcactg	agaaggctta	cttaaaaaatg	ttttctccc	1980
tgcactttca	tgattattaa	gtacccctag	aaaatgaact	catagcagca	aataatctaa	2040
tgactccttt	taggttacag	agcaaagtag	ctttctactt	ccacatcaca	ttataatata	2100
gccttataat	ttcttctttc	ctgcaacctt	cactttccta	cctaggaaaa	ctcacctccg	2160
gtgccagaga	aacttcccag	gatgcactag	ggccctgtga	acaatacaga	agttgtggac	2220
tctggctctt	tgtcccacct	aagtccttcc	agaagggctc	tacagcatgg	cttagtgaca	2280
С						2281

<211> 2175

<212> DNA

<213> Homo sapiens

agtgaagctg	ggcgccttcg	gggcttgagc	ttctgagggt	cgggtccagc	gcgtgggctg	60
ctggatggcg	gaaccccagg	cggagtcgga	gccctgctg	ggcggggccc	gcggcggtgg	120
cggcgactgg	ccggcggggc	tgaccactta	ccgcagcatc	cgagtcggcc	ctggtgccgc	180
ggccaggtgg	gacctctgca	ttgatcaggc	tgtggtcttc	atcgaagatg	ctattcaggg	240
ttacctgttc	gggtgggccc	atttccagaa	aaacctttgg	ctgctgggct	acctcgtggt	300
gctggtggtg	tctctggtgg	actggaccgt	gtccctgagt	ctcgtgtgtc	atgagcccct	360
gcggatccgc	cggcttctcc	gtcccttctt	cctgctgcag	aactcctcta	tgatgaagaa	420

480 gaccttgaaa tgcatccgct ggtcgctgcc ggaaatggcc agcgtcgggc tgctgctggc 540 catccacctg tgcctcttca ccatgttcgg aatgctgctg ttcgctggtg ggaagcagga 600 tgatgggcag gacagggaga ggctgaccta cttccagaac ctgcctgagt ctctgacttc 660 cctcctggtg ctgctgacca cggccaacaa ccccgatgtg atgattcctg cgtattccaa 720 gaaccgggcc tatgccatct tcttcatagt cttcactgtg ataggaagcc tgtttctgat 780 gaacctgctg acagccatca tctacagtca gttccggggc tacctgatga aatctctcca 840 gacctcgctg tttcggaggc ggctgggaac ccgggctgcc tttgaagtcc tatcctccat 900 ggtgggggag ggaggagcct tccctcaggc agttggggtg aagccccaga acttgctgca 960 ggtgcttcag aaggtccagc tggacagctc ccacaaacag gccatgatgg agaaggtgcg 1020 ttcctacggc agtgttctgc tgtcagctga ggagtttcag aagctcttca acgagcttga 1080 cagaagtgtg gttaaagagc acccgccgag gcccgagtac cagtctccgt ttctgcagag 1140 cgcccagttc ctcttcggcc actactactt tgactacctg gggaacctca tcgccctggc 1200 aaacctggtg tccatttgcg tgttcctggt gctggatgca gatgtgctgc ctgctgagcg 1260 tgatgacttc atcctgggga ttctcaactg cgtcttcatt gtgtactacc tgttggagat 1320 gctgctcaag gtctttgccc tgggcctgcg agggtacctg tcctacccca gcaacgtgtt 1380 tgacgggctc ctcaccgttg tcctgctggt aaagtaggcg catccgaggc cggcctctcc tgggcgggtg ggtgagcgcc acctgggctc tgtgctggcc catctcaggc ctcccctgag 1440 1500 gactagaggc tgtaggaagg tgggcttctg ctctcagtgg tgagggctgg cttccctgct 1560 ggccgagttg ctcagtgggc agccggtgag gtctttagga ggctgggttt ctactgcatc 1620 cgagtgtcat ggggggcagg ctgcccctcc cgacccccag gggaagccct gaaggacttg 1680 tagccetgge cagegactee agecegggga acageetett aaacgteaet gatagaeggt 1740 gtgacctcag catgggtgga gcgaggggcc agggggctct caggcaccag ggtgttcttg 1800 ggaaacgctt acacttcctt tccccagacc cagtgggagt gagggcatgc cacacttggt 1860 gtgtgtgtca caagcagcca catgagagtg acgtttgctg tagccagcag gcccctcggc 1920 acatgggtga agagaaattt gaaaagggcc ctgcagtctg tccttgactc agtatcttct 1980 ctgccacctc tgccacccca atctgtgcag tcccccgatt cctgaggcca gggtgtcttt 2040 ccagctgaaa gaagtcccga catctggaac caacccgtgg ggtccaggac caagctctga 2100 tttctcccca aaagcccctt ttggggagaa tgtgttagag atgagcttta taataattcc 2160

ggttttggag atctc 2175

<210> 17

<211> 2092

<212> DNA

<213> Homo sapiens

<400> 17

60 atttgtgtaa aagttccatg agagcagagg ttttgtttcc tttatccctc catacacagc 120 aactggaaca atacaatgca tagagtaaac atgcaacaga taacctgaag gaatgctgtt 180 teatgeette atteetteet ataeattatt geteecetaa tgttetetgt gtttggaetg 240 ccataacctc atctaccttt tctccttact accttctcat tcttcaaaat tcagctcatc 300 cccaaattcc tctgagaagt ccttcaggtt gttcctctcc atctaatctg aataagatgt 360 cctttcttgg agctctaata gcgtttagac tagacactgg tcctcagagt gaggtttctg 420 catggacagc atcaccgtca tctgggaatt cattagaaat gcaaattatg aggccctacc ctagacctcc tgaaacagaa actctgggag tggggccaac aacctgcgtt ttaacaagcc 480 540 ctgcaggtga ctgtgacgaa cacaaagttt gaggaccact agaatatagt cactgtagaa tatatctcca ggatctgaca caacgcctag agcaggatta ttgtgaagat cgacctgaaa 600 660 tctatcttcc tgtagcctca tcaatcctgg ttgagaatat gaaaaactag ttgagttgca 720 tctctgttag gcagctttac aacatttgag gatagcgatt atctctactt ctccacctct 780 catecetage teetetggtt taatgtettt tttttettat gtgetataae tttgaateee 840 ttcactttct tccttggact tatctggaca attccaactt acttcatatc catcttaagt 900 gtatattcaa aatatccttt tagcttttaa cctacaattc tgaaaggtgg aactatacat 960 gtctgtaatc accccagcaa gacagagttc acaatgaaca tagttagaat tccatttgta 1020 cagitggagg tgttcctagg tgggcggatt gcttgaggtc aggagttcaa gaccagtctg 1080 gccaacatga cgaaaccccg tctctactaa aaatacaaaa ttcagccagg tatggtggca 1140 tacgcctgta atcctagcta cttgggaggc tgaggcatga gaatcaattg aacccggtag 1200 aggcggaggt tgcagtgagc cgagatcgcg ccactgcact ccagcctagg tgacagaggg

agactctgcc	tcaaaaacaa	accatccctg	tcgctcccat	cctagaccaa	tctaattgca	1260
agtatctcac	agggagccca	agtatcaatg	tttttttgaa	cagctttatg	gaggtataat	1320
ctatatacca	taaaatccac	ttattttaat	atatgatttt	agtaaattta	aagacttgtg	1380
cagcccttac	cacatcatac	aaaccagaat	gtttccatca	cccaaaaaga	aacttcatgt	1440
ctatttagtc	actccctgtt	tctactccca	gctctaggtg	gccattaatc	tgagtatctc	1500
tagatttgtc	ttttctagac	ctaaacatca	ggtttttgtt	tttctgcagc	cagagttgag	1560
aaccataatt	ctaaatgcat	tatgagaaat	aatggttttt	aaagattata	tataatattt	1620
tacgtatttt	catatttatg	actcccatcc	ttacagtgaa	tgcgtctatc	accagtaaga	1680
caaagatcat	taatttgata	atggaactta	acagaccatt	ctttcctttt	atacatttta	1740
gtatcatatt	cacaatggcc	tcccattctg	tccccaagtt	attttaaaac	atctccagtc	1800
ttgctttttt	cccctttagc	tcataaatga	atagtgctgg	aagatatctc	aggagcattc	1860
tccctgagat	gatgtcttca	gtaatgatcg	cacgtattgg	tgttgattcc	atccttgaag	1920
ttactttcct	ttatctttca	cagtggtgtt	tcttcactag	aggttttgct	gtctgattaa	1980
cttctctgcc	aaataaatgg	acttttgctt	cataggtaca	caaacatttc	taaaactttt	2040
tttggaaaat	atatttcttt	cttaaaaaaaa	caaatagtgc	atgcacattt	tt	2092

<210> 18

<211> 4680

<212> DNA

<213> Homo sapiens

tatccacatt	gtttttgttc	tttttaacat	aaatttactt	agttaaaatt	aaatccagta	60
ttgagaatgc	actttataga	tggcatgtga	aagtttcaaa	ggaatttctt	tctgcacttt	120
aaaatgtcct	gtctgctagg	tcctgaaaga	cagctcccag	ggggaaccct	gccttcattg	180
cttgtggttt	ggttgctcga	tttctgggaa	cgttccccac	tagcagttcc	aaagacatgt	240
tcagggcccc	caagagctga	gcatgggcat	caaacaagag	ccctgcattc	ttgttagggt	300
ttccccaccc	gctgtgggta	ataggactat	taggactgtt	tagcagtaac	ttgttatgga	360

420 aggcctaaaa tccatgtgga cagacctggg caagagccta ctcctttgtt ttctgccctc 480 tggtgatggt gaagatgact tgggggtggg aatgctgaca gagacatctt tgtctgctag 540 acttttcttc ctctttctcc ctcctgtctt cagtatccag tttcactccc cagttgccct 600 gacgcaggcc tgaggaggtg cttggcagct ctgaaaccca gggcttgtct gtgtagaaca 660 gccatgttgg caggcttggt gtcctcgctg ccggtgggct gggtggtttc agggagggcc 720 tggggcagaa gccaaggtca agtgcagtct cctgcctcc agctgcctcc tggatgagaa 780 tgtccccag gaagcetttg tettgtetet gtccetetae etgeagggtg aaggaggtgt 840 acagactgga agagatggag aagatttttg tcaggtgagt gacttgaccg gtgaagctca 900 gattcaagag gaggtggggg tgcggccgtg tcctgtagtc atcctccgtt tcataagatg 960 ggtcgggggc ggggggtggt gagctgcctc cagcggtccc ctcacctcat ctgcctcgct 1020 gcagcactgc ttgcagtcaa gagtccccca gctgacagct gcttcagcat cctatcagga 1080 gggagccagg cgggctgtgt caggcagaaa tacgggctca ttgatgctgt catagttacg 1140 atgggcctg cgaggggcag agcagcaagc tgcttgaaat accataaatc ccagctcccg 1200 ctgctgagag agaaattgag cctggagggg tagaaggggc ataaatgcgt ccttatattc 1260 ttagtggtgt gcgggtgctc acagaactca gtctccttct gggtgtgctt atgtagaggt 1320 tacattaact cttcagtggc tgcagtgttg ccatgggcac ccgtggtgtc agatctcacc 1380 cttactggtg tcaccctgaa atccctcaag cagcagtgac acagcagggt catttgttac teccetgeet ceaetgeetg agtgggaatt eagggeetga attetaaaet eageatggee 1440 acceaetegg etgtgtgeet eagttteate ttaagteaaa eeaggateag ataetgeagt 1500 1560 tggggtgatt ttattagtca gagactaatt ttatcagcca gggccttttc tctctcatgc 1620 acgtaccttc tcggggaaat caggttggag atgaagatca tcaagggctc cagtggcacc 1680 ccaaagctca gctacacagg gcgtgatgac cggcactttg tacccatggg cctctacatc gtcaggacag tgaatgatgg gtgaggaggg actgttcccg ccatcccctc ccctctcccc 1740 1800 tetectegee aggtgatggg teeagaeeet acetgageea gagegaaggg eteecageta 1860 aggtgggtag cagccaggct ggcatttctc tgaggcatat gttaggggac agtgttccct 1920 gagcctcttc tgttcttccg tgggccctgg gagttggtta ggcaataggg agaggagctc 1980 aacttgtaca cacgcacgtg ttgttctcat ggcaggaaaa gggccttctc agtagacagc 2040 agcaaatcca gaaagtcaag cttggtttct gtccatttgc atcccccttt cttcagagcg 2100 ctctggctaa cagagtccta catctgtcag agtcctagag atgttaccct gatggagggt

2160 tggcaggact ggggtggggt cgttgagaag aagtcatcgc gtagtcattc tcctgcagcc 2220 cctttgggct ggtgatgaag gctgctgcct cacgggctat tccctgcttg cttttggtgg 2280 gaggcaggaa taggaccacc gggagtggag gaaggtacac gcctgtcctc cacaagtgct 2340 ttgtgtccct tctgggcttc atcccctctt cctcccatca gagccctgga ctatgggatt 2400 cagcaaaagc ttcaagaaga agttcttcta caacaagaaa accaaggact ctacttttga 2460 cctccctgca gactccattg ccccatttca gtaagtagct ctcctccaag cctgccctcc 2520 ttagcagcct caaatactcc tgcaggatgc cagccagctg tcttgggggc acaccctggg 2580 tcctgagact gttgcccatg caggggttcc cctgagcaca ggcctgagaa tacttgtggg 2640 gatggcagcc ccctgcaggt gtggctggac ctgggtagag ctggtgaggg aagcacgatg 2700 cctggacctg ctaatggtta cgggcctggc tgtgaaggcc catctgggca gcgtatccac 2760 cccatggagc agccacgttt cggtgacatt ccaacactgg cctgatggtg ggaacctgct 2820 gagggcccac agccctgccc cttggcactc aaggtcccag ctgtccctca ttaggacccg 2880 gtgtccatta gtcagactgt tggtcatagg cttccccagc agccctaatg tgcctgtaat 2940 tagccactga cattttctgt caccacacta ctaatactgt atattagaga agcacagaca 3000 gataagtcag gaatatcagt cactgtagga atccagttgg atgcaattag cagcaacagc 3060 tgtttgttgg gaaaagttgg ttctgggagg caggggagtt agggcctacc gggtaccttt tgcctgccgg gggaagaacc tcaactaaag tcattgacag acccctccgc cccacaccct 3120 3180 taagaacaca tgaccctgtg ccatctgggt gcagtcctga cctctttccc atccctctcc tccccagcat ttgctactat ggccggctct tctgggagtg gggggatggc attcgtgtgc 3240 3300 atgactecca gaageeccag gaecaggaea agetgtecaa ggaggaegte eteteettea 3360 tccagatgca cagggcctaa gagcctcaga atgtgccacc cctgcagaat gccctgtcat 3420 tcctgagatg gggccacctg gggcccacag tgctggcttc ttccccctct tgaaaaggga 3480 ctggggagca ttgcacctgg catgaggagt gggtggcctc ctctccatcc cctgaagagc 3540 teaggeaggg ecetgeagag aacaeteatg tteettetgg gacaeetgee tgggaaettt cccctgccag gactcagcct gaaggagctg ctcctgaggc aggtatgagg tcagtgccta 3600 3660 gggcacgtgg gactgatgga ggacatatca gagtggcaga gctgtgggct ctgctgttct 3720 ctcctgcatc ctgtagactc acttttctga gttccatgca ctgccctgag ggtagccatg 3780 cccttgcttt gcccaacttt ttattgggcc atccctgagt gggtggagac ctgctgtcat 3840 gagctggcca ggagaacctg ctataaaaaa atcaaggttt tgtttctttg aacttactct

gttttgatgc	caaattggag	accattttct	tgtctccttc	cccactcat	cctggccttc	3900
cctggagttc	ttcctagccc	agagctctga	cagtccagca	gggtgggaag	gagggagttt	3960
gggcaaactc	tcatccctga	taccacattg	agatcctggg	agccctcttt	tcgtactgag	4020
tatggagttg	tagagccatc	ctaggtgcca	tcccttttg	gtccaaacat	tgggcagcgc	4080
tagatggcag	gaagcagcct	tgaagacccg	tctttcccc	acagcagcag	gggccccagc	4140
agtaacaaag	ggtacctcca	ggggtttggg	tagcgctgcc	ctctggcagt	catgcaccgc	4200
tgtctgccat	agccgctcta	gggtcttggc	agaattctga	gcttgaagtg	cagctccctt	4260
actacccttt	cccttccttt	ttcttcccta	ataggaggta	caatctgctt	ttgtttgtcg	4320
ttaagtggtc	actcccattt	cctttatctt	ggccgacaac	acagagagga	gggggagctg	4380
ggcagtagct	tggggtgggg	gtgggcacct	gtgtttgttt	ttaatgggaa	atacctctca	4440
gagatgttca	tgcaggctct	ctagggcccc	atcccagtgc	caggctggtt	tccatggaga	4500
tagggcactg	aggctcccgt	gaggttggaa	tcgacttcac	catgggggtc	cttcagccag	4560
catccagctc	cccaccccca	ggctggcagt	agcactgctg	agatgctgta	tttccaccca	4620
attctgggta	tatcagtgtg	tcttgcagaa	tcttggatca	ttaaagataa	acatatttt	4680

<210> 19

<211> 4096

<212> DNA

<213> Homo sapiens

aaacattagc	tagtttagtc	atttagactt	agaaggaatt	aagtaagtac	tccagttcat	60
agtagtagca	ggatagaatg	gtaataaatc	accacaaaac	tttataagaa	aaatagtctg	120
taacaaaaaa	ataagcaaaa	ataagtaaga	aagaaaacta	aaaaaatgag	catcaaaata	180
tatttcccaa	agccaggaac	tttgaaagct	attggacttg	tttgcctctt	tgtgcatatt	240
ttaatagtat	cgacaaatta	taggaatgta	cttgactgga	aagggagaga	tgacatcagc	300
aggctaattg	ttgccacaag	tgatagctga	tggtgagaga	cagataactg	ttaaattcca	360
gcacaggcac	tgaagaagat	actggtctac	catgccatgt	ggagataaag	aatacaaaac	420

480 aacctgtagt cctttgaagg gtcgtgtgtg acagttcagt taagttggca ttgacccagc 540 actctactgc agctatttga tgccagggat ttaaaatttt aggtatttag ctacttatta 600 ctaagtaact tgtgaaacat ctcctaattg caccettgaa tttcacctta attctgattc 660 acacccaaag aataggaatg aaggataagg tgtggagtaa gtaaagatga agccacacga 720 tttggatcac tgggacagat actgtataga atgatacttt tttccatagt tgtccacctt 780 agaaagggcc ctcaggaatt ttaaacaaaa tgcctgttgg ttctctttag agttagttca 840 cttttatttc aagtgggttt ttttctcaga ttctctgctc ttcttcccac cctcctaaca 900 caaattacat tggtcaaaca tttatttcca attgataagt agataatgtc tgctataata 960 gaatttaagt ctgtttttca tttgagaatc tgaaggatga atacctgatt tgtaagtttt 1020 atttcattta ctttatttga ttgtatgtgt attagccaca gaatggaggc aaattcagca 1080 tetttettta aetetatget gtttgtttta gaggaagtee aeaaatgaag gggacaeeee 1140 attttaagga agaacagtgt gctccagcat taaatttgga gatgaggaaa atactggatt 1200 tacaagcacc catcatgagt ttgcagtctg tgttggaaga tctcctggtt gctacttctg 1260 atgaacttct tcatcttatt cactgggaag gaatgacaaa tggaaggaaa gccattaatc 1320 tttgcgcagt accettttca gtagacetge agteatetag agtaggttca ttcctgggct 1380 tcacagacgt acacatcaga gacatggaat actgtgccac acttgatggg tttgctgttg 1440 tatttaatga tggtaaagtt ggatttatta caccagtgtc aagtagattt actgcagagc 1500 agetteatgg agtttggeea caagatgttg ttgacggaac gtgtgtagea gtaaataaca 1560 agtatcgact aatggcattt ggctgtgtga gtggttctgt gcaggtctat acaatagata 1620 acagcactgg agccatgctg ctatctcata aattagagct aacagcaaaa cagtatcctg 1680 acatttggaa taaaacagga gctgttaaat tgatgagatg gtctcctgac aatagtgttg 1740 taatagtgac ctgggaatac ggaggccttt ctttatggag tgtttttgga gcacagctga 1800 tttgtacact tggaggagat tttgcttata ggtctgatgg caccaaaaaa gatcccctta 1860 agatcaactc tatgagctgg ggtgcagaag gctatcacct atgggtaatc agcggatttg 1920 gttctcaaaa cactgaaatt gagtctgacc tcaggagtgt agttaaacag cccagcatcc 1980 tgttatttca gtttattaag agtgtactca ctgtaaaccc ttgtatgagt aaccaagagc 2040 aggtgttgct tcagggtgag gatcgcttgt acttgaactg tggagaggct tcacaaaccc 2100 agaatcccag gagttettea acacactetg agcataagee cagtegagaa aagageeeat 2160 ttgcagatgg aggtttagag tctcagggat taagcacttt acttggacat cggcattggc

atgttgtaca gccatttctc tgctattttc atttccccat actttgaact attcattcta 2280 cactgaccta gcatcaatgc cagttctgcc tagccaggtc tgtgttacca gagagccaag 2340 tagagcagag gatcaaagaa ggagcaaaat atgatcgtga caggtggctt agcctggtgg 2400 aatgatttta tggtccttgc gtgttataac ataaatgacc gtcaagaaga gcttagagta 2460 tacttgcgaa catcaaatct ggacaatgcc tttgctcatg tcaccaaagc acaagcagaa 2520 acattactgc ttagtgtctt ccaggacatg gtaatagtat ttagagcaga ctgttcaata 2580 tgcctttaca gtattgaaag aaaatctgat ggtccaaata ctactgctgg tattcaagtt 2640 cttcaggagg tttccatgtc acgctacatt cctcaccctt tcctggtggt atctgtcact 2700 ctgacatcag tgagtacaga gaatggaatc accttgaaaa tgccacagca ggctcgtggt 2760 gcagagagca ttatgttaaa cctggcagga cagctcatca tgatgcagag ggacaggtca 2820 ggcccacaga tccgggagaa ggacagtaac cctaataacc aaaggaaact tctgccattc 2880 tgtcctcctg ttgtactagc ccagtctgtt gaaaatgtct ggacaacgtg tcgagcaaat 2940 aaacagaaac gtcaccttct ggaggccctc tggctgagct gtggtggtgc agggatgaaa 3000 gtttggctcc ctctcttccc tagggatcac cgcaagcccc attccttctt gtcccagcgg 3060 atcatgctgc ctttccacat caacatttac ccgctagctg ttctgtttga agatgcttta 3120 gtccttggtg ctgtcaatga cactttgctc tatgattctt tatatactcg gaacaatgct agagaacagc tggaggtgct cttccctttc tgtgttgtgg agagaacctc tcagatctac 3180 3240 ctccaccaca ttctacgtca acttctggtc agaaaccttg gggagcaagc cttgctcttg 3300 gcccagtcct gtgccacatt accttacttc cctcatgtgc tggagctcat gctccatgaa 3360 gtactggaag aagaagctac ctcacgggag cccattcccg accetctgct tcccactgtg 3420 gcaaaattta tcactgagtt cccctcttc ctgcagacag ttgtccattg tgccaggaag 3480 accgaatatg ccctgtggaa ttaccttttt gcagctgttg gaaaccctaa ggacttgttt 3540 gaggagtgtt tgatggctca ggatttggac acagctgcct cttaccttat tatcttacag 3600 aatatggaag teeetgeaat aagtaggeaa catgetaece ttetatteaa cacageaeta 3660 gaacaaggca agtgggacct ttgtcgacac atgattcgat ttcttaaagc cattggctct 3720 ggagaatctg agacacctcc atccacaccc acagctcagg aacccagttc aagtggtgga 3780 tttgagttct tcaggaatcg aagcatcagt ttatcccagt cagctgaaaa tgttcctgcc 3840 agtaaattca gtttacagaa aacactaagt atgccatctg gtccctctgg aaaaagatgg 3900 agcaaagaca gtgactgtgc tgagaacatg tatattgaca tgatgctctg gagacatgct

cggcgcctct tagaagatgt.gaggttaaag gaccttggct gctttgcagc ccagctgggc 3960 tttgaactaa ttagttgata ttcaaggaat tattttcatt ccaaacttag gaatggataa 4020 aagccaactt tttgtacatg agttggaatg cccactgttt gaccaaagat gtaaataaag 4080 tagaacctat gtctct 4096

<210> 20

<211> 4492

<212> DNA

<213> Homo sapiens

tcattccatc	atctctgagc	cagcagagca	atcccccaaa	gtgctgttag	ttccccaaac	60
agctccagcc	gacccctctt	taggtcagaa	catagctaat	cccttaatcc	cattttctga	120
tgaaatggac	cacactgcat	cccaaaatgc	ccaggatctc	ataggcatcc	ctcatctagg	180
tgtttctgga	tcctcaacaa	aatggcattc	cgagctgtcc	ccaacagagg	gtccccattc	240
agcaggttca	tccacacctg	ggtttttgag	ccccatggca	gaactgtccc	atccgtctcc	300
ccctcccca	gcacttggaa	gtcttcttca	gcttccagat	ggaagcccct	catggtcaat	360
gttggaagtg	gcttcaggtc	ctgcatccac	ccagcagatc	aaagctgggg	tgcctggaag	420
agtgcacaat	ggggtgtctt	tgccaacttt	taagaataca	gaaacagcga	cccatgaggc	480
tgagcctcca	cttttccaga	ctgcagaatc	aggggccata	gaaatgacca	gcagaaagct	540
agcctctgcc	actgcaaatg	actctgctaa	cccgctgcat	ttgtcagcag	ctccagagaa	600
ttccagaggg	cccgcccttt	cggcagaaca	cacctcttct	ttggtgcctt	ctctgcatat	660
caccacactg	ggtcaagagc	aagccatcct	ttctggggcg	gttcccgcat	caccatcaac	720
tgggacagcc	gactttccct	ccatacttac	tttcctccag	cccacagaga	atcatgcctc	780
cccatctcct	gtgccagaaa	tgcccactct	tccagcagag	ggcagtgatg	ggtccctcc	840
tgcaactaga	gacttgctcc	tctcaagcaa	agttcctaat	cttctttcca	catcttggac	900
atttccccgg	tggaaaaagg	acagtgtgac	agccatttta	gggaagaatg	aagaggcaaa	960
tgtgacgatt	cctctccagg	cctttccaag	gaaagaggtt	ttgagtcttc	acactgtaaa	1020

1080 tggatttgtc tctgatttca gcaccggtag tgtctcatct cccatcatta cagcaccaag 1140 gacgaatccc cttccttcag gaccacctct accttccata ctctccatac aagccaccca 1200 gactgttttc ccatctcttg gcttttccag caccaagcca gaggcttatg cagctgctgt 1260 ggaccattct gggttgccag cttcagcttc caaacaggtg agagcatcgc cctcctccat 1320 ggatgtatat gattccttaa caataggaga catgaaaaag ccagcaacca cagatgtttt 1380 ctggagttct ctttcagcag aaactggatc tctttccaca gaatcaataa tatctggctt 1440 gcagcagcaa acaaattatg atttaaatgg acacacaatt agcaccacaa gttgggaaac 1500 tcatttagct ccaacagctc ctcccaatgg tttaacttca gctgccgatg ccataaaatc 1560 tcaggatttc aaagatactg ctgggcattc agtgactgca gaagggttta gtattcagga 1620 tctagtcctc ggtacaagca ttgagcagcc tgtgcaacag tcagacatga ccatggttgg 1680 aagccatata gacctctggc ccacaagcaa taacaaccat tecagagact tccaaacagc 1740 tgaagttgca tattactcac ccacaactcg acattccgtg tctcatcctc agctacagtt 1800 geceaaceag ceageacate etetttget aaceteacea ggaceaactt etacaggtag 1860 cttgcaggaa atgctttcag atggaacaga tacaggttct gaaatttcca gtgacatcaa 1920 ttcatcacct gagagaaatg cttccacacc attccagaac atcttgggat atcactctgc 1980 tgctgaatct tctatatcga ccagtgtctt tcccaggacc tcctccagag tgctgcgggc ttctcagcac cccaagaaat ggacaggtgc agccactaat gcagcggaca cagtatcatc 2040 2100 taaggtacag ccaacagcag cagctgccgt cacattgttt ctgaggaaat caagtccacc tgcactgtct gcagccctgg ttgctaaggg caccagcagc agccctttgg ccgtggcctc 2160 2220 aggaccagct aagagcagtt cgatgactac tcttgctaaa aatgtcacaa acaaggccgc 2280 atctggccca aagaggacac caggggcagt ccatacagcc ttcccattca caccaaccta 2340 catgtatgca agaacaggac ataccacgag cacacataca gccatgcaag gaaacatgga 2400 cactgeetet ggeetgttgt etacaactta ceteeccagg aaaceacaag eeatgeacae 2460 eggeetecca aacceeacca acetggagat geecagagea tecaegeeac geecaetgae 2520 agtcacggcc gcgctgacat ccattacagc ctcagtgaag gccacccggt tgccaccatt 2580 gcgagcagaa aacacagatg ctgtcctccc tgctgcatcg gctgcagtgg tcacgactgg 2640 caaaatggca tccaacctgg agtgtcagat gtccagtaag ctcctggtga agacagttct 2700 ctttctcacc caaaggagag tgcagatcag tgaatccttg aagttcagta tcgccaaagg 2760 gctcacacag gcattgcgga aggctttcca ccagaacgat gtctcagctc acgtggacat

2820 tctggaatat tctcataatg tcacagttgg ttattatgct accaaaggga agttggtgta 2880 tttgcctgct gtggtgatcg aaatgctggg tgtgtatgga gtcagcaacg tcactgcaga 2940 cctgaagcaa cacaccccac acttacagtc tgtggcagta cttgcctccc catggaatcc 3000 ccagcctgca ggctacttcc agctaaaaac agtgctgcag tttgtgagcc aagcggacaa 3060 catacagtcc tgcaagtttg ctcagacaat ggaacagagg ctgcagaagg cattccagga 3120 tgccgagagg aaagtcctga ataccaaaag caacttgaca attcagattg tgagcacgtc 3180 caatgcctcc caggcagtca ccttggtgta cgtcgtgggc aatcagagca cattcctcaa 3240 eggeacegte geeageagee teeteageea getetegget gagetggtgg gattetaeet 3300 cacctatccg ccgctaacca ttgctgaacc actggaatat cccaaccttg acatatcaga 3360 aacaaccaga gactattggg taattacagt gctgcagggt gtggacaatt cgctggtggg 3420 cctgcacaac cagagctttg cccgggtcat ggagcagcgc ctggcccagc tattcatgat 3480 gtcccagcaa caaggccggc ggtttaaacg ggccaccacc ctgggaagct acactgtgca 3540 gatggtgaag atgcagcgtg tcccaggccc gaaggaccca gcggagctga cttactatac 3600 cctgtacaac gggaagcctt tgttggggac cgcagctgcc aagatcctga gcaccattga 3660 ttcccaaagg atggccttga cccttcatca cgttgtcctt ctgcaagctg accccgtggt 3720 gaagaacccg cccaataacc tgtggatcat cgctgcagtg ctggcgccca ttgccgtggt 3780 cacggtcatc atcatcatca tcactgccgt gctctgcagg aagaacaaga acgacttcaa 3840 gcctgacacc atgataaacc tgccgcagag agcaaagcag gtcgcccagt gagaatggct 3900 ctgtcatcag caacgaatca gggaagccca gctcagggag acgctcaccc cagaatgtaa 3960 tggcacagca gaaagtgaca aaggaggagg caaggaagag aaatggtgag aagccttccc 4020 tecaagaace acceeaget geteecaege gtgeeegeae acaeatgegt geaeaegtgt 4080 gcacaaactc acacacagcc actgggctct gaccctcagt cgttctttct attctgcccc 4140 acaagggcca gtagtctgta tgtacccctt gggttctcac cttacccctt gtctgaattg 4200 tectgtetea etteeteege eeetgttett atgaaatggt gtagtteett aggaaaaaee 4260 ttttgcggaa tgaactgatg tttgcttaga ggtttttcta attctctagt tagaaatcct 4320 ctaaaatttc taatttctaa tcacatgaat tgacgcaatt tcttgcacca gttccactaa 4380 ggcagcagat ctctgaaata actgctcatc ttggagattc ctctcatttt cctgccctga 4440 ctccctgat aagtttcatg ggttcagtct gtgccactga gtccagatat tgcaactcca 4492 cttctcccag gaaaaaacta acccaaaaca ataaaggaac agatctgtca tc

<210> 21

<211> 3416

<212> DNA

<213> Homo sapiens

<400> 21

60 ttacatgtca attttattaa taatatttag gggttttttt aaattataaa aatggcacat 120 gctttttata aaatgtttta ataccacaga tgagtatcac atccacagtc aaggcatccc 180 tttgttctgg tgttgtgtcc cacttcccaa aaataaatac ggttaacact gatgaacact 240 gttgcttgta tgtgatgtca gaaatacccc atccgttcat gcacaagtat gtatgtatat 300 acgcatatac atttacacac atatatagac atttatttat atacacatgc aagtatgtat 360 actatattca tgtatattgc ataggtttag aaaagagcaa acattttaaa agcatgctga 420 tcatttgtat atgtctagtg aacaccagta ggcaaagaca ggttaaacag agaagttcca 480 tttatttttt tgtttccacc attgctaggc ttagatctgt tatggcatta ctacaattgc acttagcatt ttctattacc tgtgtcataa aattcatgac caagagttcc tgtaattgtt 540 tatgttgcct tccatgaagc atgaaaccta ccatagcccc aagacttatc tatgctatgt 600 ttgtatttca agtaaaggag agttctttcc tctgtgatgc ttacaccact ttacaaggct 660 720 gtttgtaaca ctaacactca gtaggttgcc tagtgatatt taattagggc aggctacttc cgggaaggtg taacttcagt gtagtatggg ggtctgagca gcttgtcttc cttccagaag 780 840 gagtagctaa tgaaatcact gagaacagca tattttattc aattatgcta tttaaaaatg 900 ggactttgtt aaaatggctc atcataacca tcaaataaaa ctactaattg ttctatttaa 960 atgaattata ttcattttag gaaaagaagt agaaaaacat ctaataaatt agctttctga ttaatcttta acacttattt aatataaaat ggcttctgcc tgcatcttaa ttgaaccacc 1020 1080 tttgaatete teaacteett teactetgaa teteataete agetgattag aagteetaea ggtccttctc tgccaggtct gtcagatcga cttggaccct acccttttct gtgtccccag 1140 1200 teatecatta tetettgtet etetaagttt tgggecatag eggeagteet gteettgaac 1260 tttctgccta ctactgtcaa taattttgtc acgcagttgc aaaaatcttc cccagatatt

1320 atgctcaaaa tacatcaaaa tgaaattacc ctctgggaca agtatacctt ttactcaaag 1380 gacacatgga tgtccactga ccttgatcat cttatagaat tatggcaagc atgattctga 1440 aaatctatca ggtttagcaa atatctgtct tagtcccatg agggtacaca atcacggctg 1500 ctgcttcctc attcaacaat gtaagccaca tgcctctttg acggcacctg gaggactagg 1560 ttatagattt tacactgctg agggccatct ttggttttac actgtctcct cacagcttaa 1620 tgagaaacct gaaaataaga accaagaaaa gagtcatgcc cttggacaac ctcctcccc 1680 aggacactga gatttactga ccaggtccca gaaagaaagc agaaaaataa ttcttaggct 1740 cttgtagcat ggattttaaa atagaaacgt gaaaattgaa tggtatcttc ataatgcata 1800 gactecagag tetatttaca tatgtattea gttatgcatg taatcatatg tecatgaate 1860 aatcataagt gcatgtattt aatcattatt tgaaaaatat ttgtcactct gaggcaggca 1920 tcatactaag gatataacaa tgaatgtaat agacaaaact cttgatttca tgaagctggc 1980 atctagaaga aaagacaaat tccaatgtga taagtgcagt gcaggagaac cccagggtgt 2040 ccagcatggg ctggaaattc aaccaaggct ttattgtacc agccactcat tagccagcaa 2100 tgttttggtt caatgaaaac ataagtagga agagaataat attttgcatt tccattttac 2160 tggagtcata gtagatttct aaaaatgtat ctgaaactaa gattttaaaa caagacttag aaacactatt aaaatgaaag ctaagactga tttattctag ctctcaggat agaactagga 2220 aaaataagca gagttttcag tgggttttga ctaaatataa agaagatgaa gtacaaataa 2280 2340 tatgtaatag tggagtggat atcacagtta taaactttca gcctctgtta gcatttaaac agaggatacc tgaccactct gaggggtgtt gtgattagga atatgtgatt tgagggggct 2400 2460 aaaattagat gctgtgattt ttcaaaagat attttttaat ggctttgttg aatggcagga 2520 ttttatttta aaaactcatg aaaatcttga tttttgattt gttaatcttt gctttataac 2580 tgagaatttt aaaaatatct aggggaatgg ccgttagtta tcatttaaaa aattttaaac 2640 taagcatgaa tttaagagct agtcaaaaga aaacatacta aaaggtgtaa tttaattaaa 2700 aatacttctg gaagcttata aattttgatc agtattctta gtcattgtca agtaaaattc 2760 tattagaaat ctgtcttact gtccatccaa tataaaaaag tgctgtggtt tgatattcta 2820 agagttaagt gtaatctagt ataaccacag aagaaaattc tgcctgtaag gtatttggga 2880 gccaagtaaa tgtacatgaa aggcaatcat ggaaaactct ttggcttctg ccaccagcgt 2940 ggcaaccaca agggaggtcc tacccatgga aataagaaaa tagtgatcca agttttcacc 3000 caacttttga aatttcaata ttttgagcca aatgccttct gaaatgggag gctttgatag

tgggaaatac tgaaattatc ttttccctca gacctttagt gaaacacaca tatagttttc 3060 actctatgac agtataaaca actcaaatct atactgtttg ttaagaacag tttcaagaat 3120 taaaaagtgc tttagcgtta tgatgtattg acatgtttga gcttcagttg gggttcaaaa 3180 caaccccaac gaggtgaata atgcatataa tacattttag atgaatgcac tgaatctcag 3240 agcagtgaat tcagcctgtg cagattcata tagcaaatga tagtgctgca gccagaactg 3300 ggtctttaga aattacatat taacatgttt tctaagtaag tcattttcca tcattgcctt 3360 caaggatgtt ttatatcaat tgttcagatt tccataatat agaagatgcc tccatg 3416

<210> 22

<211> 3235

<212> DNA

<213> Homo sapiens

<400> 22

60 tgctcgacaa aggtgtcatc attaacgtac gtacctcttg gctgcgattt cccgacttcg cgacctgggc tggtgacatc agcaggtgtg aaggcagatg tcgtcctgcc agaaactgag 120 180 cggggggagg agggggaag gtgccaccag cttacaccct tctttttctt ggtgttacat 240 gagtgttgga taaaggagcc cacgccaata tgcacagaga attttctgca gagggacgtg 300 tgctgctgtg agacctttac caggtgttaa tgtggatcaa ctgagtcttt tccttcccaa 360 gtctcatcca gccttgcctc ttctctggga ggtcacatgt catttggagg cagatggggg 420 ctccttgtcc taatgagaca taggcatcct ttgacttgtg aatttcatgc tgtggagcct 480 tgtcacagtg tggggggaatt tcattattca tgcagtcaaa aagactcgat ctgcatcttg 540 actetgecae atacetecte cagactgtgg geaaactgtg tateetteet gaaceteagt 600 cttcttatct acaaaatagg aatgatagtt tctgcctgaa agggttcttg gaaggagcaa 660 acagaagata tatatagagc acctggcaca gtgcccggca gagggtgggt ttgtagattc 720 cctctgtaac ttctcagcct tgtttgcaca ctggcttttt tgtcctgctg gcttcctggc 780 ctctgcttcg tggccttgcg acttcatgct taagcacgga gcagggttgg aaggaagaaa 840 catggagtag tggcccctga ctggaagctt cttcggacag gtgtacaacc cttccagagc

900 ccctgtagtt gctgccactg tcactgctgc tgctgcaacc tcaagataag gatcacactg 960 cccaagttca gcctgctgtc tgggtgtcag cctggagccc aggcagcacg gtggccattc 1020 attgctgctt gtcagagaag aatgcagcta tcttctttcc tgcgtgtgct ggcagccgtc 1080 tgggtggcat tagtaaccca gccaccccgt gggccttctc cacttcagct caggtctttg 1140 ctgagagcct gagttgtaga cggaggctgt gaatgcgggc ttggtgaagt gggctgagca 1200 cgccagcaga tgggtgggcg atgggcttca gcagtgtccc actgctgact gtcagtctgg 1260 gagtggtggc gtccccttct tccctctgcc tcacagaagt tgcctcctga agttgccgcc 1320 ttagtctgaa actggggggt gcagggtgt aggggtagcg ggcagctttg cagaggagag 1380 gttaggcagg caggcaaagc ttgatgggtt ttgtgttttg cagagcaccg tggcctcctg 1440 ggatgctaag gtcaccctca ggtcatccca ggtgtttgct catggcaact cgcttccctg 1500 geggttgtca aagecectee aggeceatge ttgtcttcae caaggeettt ettteteett 1560 cagaggcccc tgggagcagc tcctgagctg gtgctgagga gcctcaaggt acaagatggg 1620 aaagaaattg gaggccacag gctggacacc tgattggaac aagagctata gcctgagcgt 1680 ccaggtgtcc agccaagttc ccaacccatc ttccctgagc cgcttaaatt tacattgttc 1740 tcttgctccc tggaggaatg gcaagttttc tgttttcctc tccctacatg gatccatatc 1800 ttcctatagc cacacagaag gtgccaagta aatgtttgtt gaatgaatga ctgacctctg gacaagaggt tttcctgctt ccccattgat tccagctgat ctctgggctt ctttccatgg 1860 1920 ctaccgaagg aagagtaaag tttctcttca agcagccgtg cctctgggct ctcagctgtg 1980 2040 ctctgctggc ccatacgtgt gtgggctggg attctgtcct cctgtccttg tcctcatctg 2100 ctccctatgg ttttgctcct tcttccatcc ccccactcat ctgggaccct ccagccacta 2160 agagactcca cagcagccct aggccagctc tagcctagtg tcttcccttt gctaggtccc 2220 cactetectg catgaggegt ccaegecagg caetgtette aetgtgtaat gteacecaet 2280 ccatcttagg gatgcttggg tcatattttg aaggggggt gtttgagacc tctcccttct 2340 ctcttccccc atctcacctc cacgccttcg gagagagaag tgatcatgtg accgcggaaa 2400 cagggatcag aaaggaaatc aaataacagg aattccatcc tggacactgg ggcctgacaa 2460 agagctcttg gaccagtgct ggatgcaatt tgggcggttt ggtttgaatg ggggaaatat 2520 gagtttccag aacagggtat ttgaaatcat ggctactcag aaaattgagg cagtggtcac 2580 tctggctgta aatgcggcac tctgtgattg tcaagacctt tgtaattgag ggtgccttgg

2640 ctgggtccag gatatacttc atcataagcc atatctggag ccagcatgaa ttacagggga 2700 caggaattcc cattcatcgg tcacttccca catggggcta gggatttcgt gtgtacactc 2760 attccatctt ctcatgtggc tctgtgaagt aggttttgat attccctttt tacagatgag 2820 agagtggaga ctctgaaaag ttaaataact ggcccagatt tagttagtaa acagcagagg 2880 tggactttga cccgttgctc tcactggccc caaagcctgt gttcatgtta cacactggtc 2940 ccctcccact ccaggtgtct gtactttttg tgtcaccttt gagaaaggtg gtcttttagt 3000 ttctttagcc acacggtgag cagcttggac tctggggata cactaaactt gccagctctc 3060 ttcaatcctc acatcctgtg tttcattgct agtgtccctc caggatggat attccagtcc 3120 tegeagetea gggeteegea eteceeatga aagaageata acaattagea eeaaaageaa 3180 gctactgggg aggctgaggc aggagaattg cttgaacctg ggaggcggag gttgcagtga 3235 gccaaaatca caccattgct ctctaacctg ggagacaaga gcgaaactcc atctc

<210> 23

<211> 3562

<212> DNA

<213> Homo sapiens

<400> 23

60 aggtgtgtcc atggcggcgc ttgacctgcg agcggagctg gattcgctgg tcctgcagct 120 gcttggggac ctggaggagc tggaggggaa acgaacggtg ttgaacgccc gggtggagga 180 ggtaggcgcc tgggggggc aggagggtac acgggcgtaa actgagtctc accgctttcc tctccctgca gggctggctc tcgctcgcca aggctcgcta cgcgatgggc gccaagtcgg 240 300 tagggccct gcagtatgct tcccacatgg agccccaggt ctgcctccac gccaggtgag gaagetteea tgetgggetg ggtgggeggg egggegegtt etaggeeegg getgeeaaag 360 420 ctccatcctc ccttctcgtc cttcagcgag gcccaggagg gactccagaa gttcaaggtg 480 gtgagagctg gtgtccacgc cccagaggag gtggggcctc gcgaagcagg tgagcccct 540 cttccttctg cagaacccct tcccagtgtc aaagacaaaa tgcaaattat ggagatgatt 600 taaattaggt ttttgcgata agagagagca tcccagagca gaagaacaga atgtttttgt

660 agggtggttt tgccttagac ttttatagga agtagagaaa ttgttggtga gttgctttac 720 actgggaata gatttacaat cacatacatt tcagtcagct gaacagaaaa tatttatctg 780 tgtgtctagc tagtttcaga gggacaaact tctaatccca gttaatcatc ctgagacaaa 840 gaatggggag ttggaacgtc tatgcctggt ctgttggcat gttcaggtac aatgggtaag 900 atcagtgtca caggcaaaca gggtcatcag tgggtcttac aggagtcacg ggaaagagtg 960 gacaaacagt ctcatctgaa tcacaagggg aaaggctgtg ttttgtggta agctgtttcc 1020 tggaacccca aagttggaat tttccaacca acagtgtttt atagaatcat gagctcagat 1080 caageteaac attgteacca agatgataaa ggteagggag taagateeca geeteeteea 1140 acctttcttt cctcaggtct gcggaggcgc aagggcccca ctaagacccc agaaccggag 1200 tectetgagg ceceteagga eccetgaac tggtttggaa teetagttee teacagteta 1260 cgtcaggctc aagcaagctt ccgggatggt gagtggaccg tgttgtttgg ctctgtggcc 1320 ctcagaccct ctatccacag ggaacacttg agcactgctg ccatggctgg ggttagtctg 1380 tgaaaggctt tgcaggtttt cctccatcca aacttccgtt gtacacccat tattttttcc aaaagcattt actggttgtt ggcagcattc gggttcatgc tagctgctgg ggatacagca 1440 1500 gggaacaaaa gagacaaaca cttttcatgt aatgtttaga agcagacaaa ggcaacgtgc 1560 aaataagtag gcccttaaca taagtcaggc tgtgaaaatt gttatgaaag acacataatg gagtgggaca ggagtgggcc aggggaggtc tctctgagga ggtgaaggaa aagctttgtg 1620 1680 ggtgattttg gggaacagtg ctctagatgg aggaaccagc caggacaaaa gccctgaagc 1740 cagatatatc tggtatgtgc cgaggccggt ggcctagagt ggagtcaggt gatgtaagcc 1800 ctgatgaaga ctgtgggacc cacagagagg ctctgagcag aggatggtgc aactggctgt 1860 acagggtcac aggaatgctt gggtgctggg cggggacaca gagcagaggg aggaagtagg 1920 tgtcaggag cagccagtgt gagaagcaga tagcgtcact ggaggaggag gtaagtggtg 1980 ggaacctgca caggttttaa gaatagaagc cccagaattt gctgacagat aagatatggg 2040 agtaagggaa ggaaaggagt ccaggagagc ctgcggtctc cacccagaac ccctgggagg 2100 atggagcgac cctcacctgc tgtgggcagc tgagaggatt ccagaaggca ggagttggtg 2160 tggtctgtgt ggtatccacc gacgccctgc tggagagtct gagtgggcac ttgggcacat 2220 gtatctggag tttgggagag gcctgggctg gagagagatt tgggagtcca ctgcatagca 2280 ctggtgttta aattccaaag tttttgacac aaacactggt ttaaagctga gataggatga 2340 gatcagcaga gggcctgggg agtatggacg ggaggtgagg gagaagaggg gagaagccag

tcaaggaaac	tgaggagcaa	cacctggggg	caggtgtcct	ggaggccaag	aagagaaagt	2400
gtttcctgga	gcgagtgatc	caatgtgtgg	tcagccctgc	tgctgaacag	gaggccgaag	2460
acgagagctg	cccggaggac	tgggcagcag	ctgttccagc	agagacatca	gcaaaagcca	2520
tctagaggtg	gatccagagt	gtggactaac	agagaaaaga	agtggaggga	gagcaggcct	2580
gcagctggcc	gcagacatag	ccagcctcca	gaaccgcatt	gactggggtc	gaagccagct	2640
ccggggactc	caagagaaac	tcaagcagct	ggagcctggg	gctgcctgac	atgcgcgcaa	2700
agaggcaggg	cagcgagcac	agctgttctc	cgacatggct	acgtgatctc	aggccttctt	2760
ccttcacaat	tagctcttgc	ccctacccca	cgccagctaa	tgcccttct	gtgtccctgc	2820
tctgcatgtt	tccattttcc	ttaggtgtga	agtttgaaga	ggcaaacagt	aattttgaaa	2880
gccactactt	tgaaaccatt	ctaaggcctg	agttcccata	ggacacactc	acataggcag	2940
gtacacgtta	gtcaacaatt	ggaactgcct	cttggatcac	tcagctgtgc	tttcatggct	3000
ggatgatgga	acactgtgcg	aagagagatg	ggggccagga	agtagcgctt	catgcttagt	3060
acatcctcca	aattgtcttt	gctggaggag	aaaaccgtac	tcagccaaaa	gatcaggaca	3120
atatgacttg	agtccacaag	gacacaaaca	cctgagtagc	tgggcagccc	ttggcagggt	3180
ctaagccagg	aagtaaaaat	gatctggcct	agatatttaa	gggaactcta	ggaagaggcc	3240
taggttttta	aaatcctgtc	tctttgtctt	accataagag	gctgagcctc	tcttcatttt	3300
tttgaagggc	cacttgtgtt	ttctgttctg	ggaacttcat	tcatttttct	actgggttgt	3360
tgatctttgc	agtaatttct	aggagctgtt	tatgtttgga	ggtaattggt	cctttgtcca	3420
tatatatgag	atgtaagtct	tattttccag	tttatctttt	tgcttatttt	ttttgacttt	3480
ttattgtaaa	ataaaacatc	aaactgcaca	gaacagttga	atagcttaat	gaataactac	3540
agtaaaagct	atggtaacca	ct				3562

<210> 24

<211> 2131

<212> DNA

<213> Homo sapiens

60 gaagatgcgc tgttccaggg gcctgggtgg gagcagccca ggagcctgcg tctccctcc 120 teggeeetgg gaggeggetg gaetgtgeea caegggaegg gtgetgaggg aeegetgggt 180 geceaectee etgaececte etgeagggt geetgeeaag eageetggge aetgeegtet 240 ggaagatgcg ccgtgccggt tctacacggt gttcccttgc tccaggcaga aaggcagagg 300 agcctggcaa ccatgtccca agttggaagg aagctctgag aaccctgctc cccagaaatc 360 ctgagcaaag gctggctggc ctacaggagc agtctagagt aagagctgtt tcctggcaga 420 ggatcaagta tccaggtcac attgaagaga catgtgagga ctccaatgga gaacaatttg 480 agagtgagaa accagttctg gaggccagga agttcaagat caaggtgttg gcaagttcag 540 tgtctgctga ggacctgatc tctcttcttt caagatggca tcttgttgct cttccctcca 600 gagagtagaa atgctggaac ctcacatgga ggaaaaaatg aaaaggacca atgctagttc 660 ccttcagcct ttttatgaac tcactaattc ccattgaggg ctccacatac atgacttaat 720 cacctcctaa atgcctgact tcctaatact ctcattttga agattaaatt tcaacatatg 780 aatttggggg tcatattcag aacatagcac ttatgatact atctcaaatc atagactgct 840 ttctcggtgg gcatctatct cagtttcttt tctgttgtta ttacagagta cctgagcctg 900 agtaatttat aaagaaaata catttatttt ggctcatggc tctataggct gggaagtcca 960 agattgggcg gttacatctg gttggctcct ggtgcgggcc tcctgccgca tcataacaag 1020 gtagagaagt gaaagggaag gtgggcttgt aggaagggg caaagcatga agggcaggct tgctttatag aaactgggac acagcacccc acaggatgag tgtataaagg ctagacagac 1080 aaggggattg ttgtgttgaa cctgaaaagt cccctcacct ggcaatgctc tctgttccct 1140 1200 gtgagaagaa ggggtttctt ttcttctggg atgattcatc ccttcacctg tggccttccc 1260 tagageceat cettgtgeca ttetgetete eaggeacate teteteagat gaatteeete 1320 ttccctcttc ctctggcccc tcctgtttat ttatctgttt cctcaccact gtgtaatcag 1380 gtaggececa etgetgtgae etetggaata atgattgaat etgecetate etetecaeag 1440 tgatgcctgg gacccagctg agatetecat cateteteaa aacaactgtg caetgacete ctgacctaag cccagcctct gcccactcag actgaccttc acgcagctgc acaatgctgc 1500 1560 atttggaage eggacetgae cacattegtt teeetetgtt gagatteatg ttetggagaa 1620 atgaaaatgc tgtctcagtg gaatgttgat tagctggagt ggagacccaa gatctctgtc 1680 caggcagggc catcaaaaca tagaagtgct cttggctttc caaaatctgc acatctccaa 1740 cttttctttt agctagaggt ggccctgtga ttgatgagtg accagccatg tgtggagaaa

agcaatgtga acaacttctg acttcgctgt taaagaaaat tggtctgtcc cccatttcct 1800
tgcattccca ttcttactgg ctgaaattca aagctgataa atggagctag agcagatagc 1860
tgggaaaatg agttgagggt cttacattaa gacttgccag caagaagaag aatttttcca 1920
gggttcctga caccaccaaa ttgttcgatc agctctgaac tctatactga gattctttaa 1980
gtatgagaga catgaacttt gactggctta agtgagctat tgaggtctct ttgctattgt 2040
gacctaactc aggggtcagc aaataacact ctgtgcgcaa aatctgacct acgatctgtt 2100
tttgtaacta aataaaattt cactgaaaca c

<210> 25

<211> 2110

<212> DNA

<213> Homo sapiens

<400> 25

60 gtgctaagat tacagttgtg agcaactata ctccactaaa gcagatagaa ttataatgct 120 tggagcccaa tatgcttata ttttcctatt ttctgagttt ggatttgggt ctggaaaggt atctttatca gttaggatgt ctagtaactt gcttgctttt ttttcctgtt accttttctc 180 ccttaaatat ttttttttt tttttgagac agagtctcgc tctgtctctt gtgggtctca 240 300 ggctggattg cagttgcgca atcatgatct cggctgactg caacctttac cttctggatt 360 caatcaattc teetgeetea getteetgag tagatgggae tacaggeggg caccaccatg 420 cccggctaat ttttgtattt ttagaagaga cggggtttca ccgtgttggt caggctggtc 480 tcaaactgct gatctcatga tccacttgcc tcggcttccc aaagtgctgg gatcacaggc 540 atgagecace aegeeegget tteeetetta aattttagga etataaetgt ataettttat 600 tttttaaatt accatatagt aaaattggct ctttggttgt gtagctttat gtgttttgat 660 gtgtgtatag atggatgtca taatcaggag agagaacatt cccctaagcc cagagatgtc 720 catggtgcta tcctccacag catgtttctc ggcagtcact ctgcccccag ccccaaacat 780 ggggcacctg cctgtaggtg ccacagaagg caacatcatg gcctgttaaa tacagtaaga 840 cattettett caaagggtta acttgttgaa eteteettgt eetttgttee etgettteaa

900 ggccagactc ccttactctc tgtgttcctt tgccctggga aacaaccttc ctcttggtct 960 ttatctatag agtccacatt ccacatctgc tcctcactct gtaaatcatc cctccggtcg 1020 aaacactctc tgtctccact aaaactgttt tctcactatt gtaaccacat ccctgcactt 1080 ctcaaattag ccaattgggt tcagcttaga ttgtgcagtc caactctagc caacagatac 1140 tggacatggc agtaggagcc caatgaatta aagataaagt gactgctttc ctttgttcag 1200 agtgctttca tggtgaccaa actaatgagc agcacccttc tgcagaggta aactttgcct 1260 tgctgagaaa ccaattgttg gcgtgtttat ttcatttatg actttgagct ttatttctaa catggcccaa agtaatcctc ttttcttgaa cacatggtag aatgccctag gtgaatccct 1320 ccagtcttcc agtaccatcc ttgactcctc tctctgatga cacatgaact ttatgctttt 1380 gcacacttca ggcaacacca aaagaaagga aaagaacagc ttagcttctt aatgtgtgta 1440 agaaaccaca gtgaaaaaaa aatcaggtgt gttgttgagg ctgctaaaag ctttcctttt 1500 1560 ttttctgtgc cagttctcgc tgcctcattg gttgagatgg gatgtccttt ttgatgtcct 1620 ctttagagag tgttatcctc acctttttgc atagtcctac caaaagacac ctcacatgca 1680 aagtgtaaca gaaaattaca gtcatgactt tagttttaaa aacaggacgt atattcatga 1740 agaatgtttg ctgttttccc agtgggttaa tcatatgaat ataaaacaga ctaaaagtat 1800 caagttgttt ttgcatttat ttattgtaga aataaaatgg attgctacct ctgagcttct 1860 gagaagctgt taacctgtgt tttactttgg gtcataatgt cgctttctgt gatctcatat 1920 gaagtgacgt tttctagaat aatccttatt ctggtatttc ggggtctttt attctgcctg 1980 aagtggttgt gtgaagtcac agaatatgtg catgtcctcc tatgtagagt taaagggctg 2040 aaagagtggc ctcaagcctt cccctccctc ccaggtgtga aaatttggat ttcaaggtct 2100 gggaggccat gttttttca gaccggttaa ggatgatcat tttatgttaa ataaacattg 2110 ggataaactt

<210> 26

<211> 2455

<212> DNA

<213> Homo sapiens

60	aagtagggga	gagaaagaga	aaatgccacg	agatggcacc	gcaggatgct	aataaaatat
120	gaaggcctca	ggtggtcagg	ttttgtatct	agggctatgg	gatgttggaa	ggatgacgag
180	gcagatgtct	agagaaccat	ggcggtgcag	caagactgca	gacctgtaat	ttgagaaggt
240	ggagcagacc	tcccgaggtg	agtgcagagg	agagagagca	cttcccaggc	ggcagaaggg
300	ctggtgggga	ggagagagag	gtgtggctga	atggaggctg	gaccagcaac	ttgcacagtt
360	aactgggaag	cctctgagtg	ccttggtttg	agcgtctgaa	tcagagatgt	gtagaagagc
420	gacgatccct	tgtgtttaag	tgatctcatt	gttaggaaca	tttcgagcag	ctgttggagg
480	tttgttgtaa	ttcttggacc	ggagccagcg	cccagcgtaa	tgttgagcag	gtggctaagg
540	cccagtagcc	ctgctccctt	atctctgtat	gtctttgtta	acggggtcct	ggctgggagg
600	tctttctgcc	agttctctcc	gtcctcaccc	tgaaagttct	gagagcctcc	tgctggttcg
660	ttttaacggc	atctgtgaag	gacaaaagat	aaggggagag	tcccagcctc	cagaggctcc
720	ttgccttaat	cttttcagcc	ctcttgtatt	atatggctgg	tgataagtta	agaataggat
780	tggagacaaa	tttcctccca	cctgaatctc	atttctgttc	tcaaacatgt	ccagtgcttc
840	gttatctgat	tgtattctca	tttgagtctc	gagagaaccc	tccctgggca	ataaatacct
900	gtggggactg	gagataggag	gggttaggat	cagaggtctg	ggagaaagga	cccaggctgg
960	ttacccagag	aggaaactcc	cagtgttcag	ctagcgctta	gtagtctctc	aagggtgaca
1020	ttctgagttc	agggcttaga	gagtagtccg	tttgcatttc	atgtctcatt	tctagccctc
1080	tttaaaaaaga	ttcctttttt	tttttctttc	ttatcttctt	ttgaaccaat	ttctctcagt
1140	taacctcaaa	tagctcacta	gcagcaatca	ggagtgcagt	cgcccagtct	gtttctctgt
1200	tacaggcata	tagctgggac	gcctcctgag	tcccgcctca	caagtgatcc	ctcctgggct
1260	tcgtttccca	cagggtctca	tctgtagaga	tttaaacatt	tttggctaat	caccaccatg
1320	acagtgctgg	ttggcctccc	tcctcctgcc	cctcaagcga	gaactcctgg	ggctggtctt
1380	cctcagcttg	tttcttctgt	tgaaccaatc	atgtacagcc	gtgagccatc	aattgcaagt
1440	ctgtctgtga	ggcagatgtc	tgagtgagga	gcagtggagt	agcccagaga	agatcttctt
1500	atggttacca	caaagagaag	agggccagac	gccatcctgc	gctggctcca	gccagttcca
1560	caacacctgt	tcttcagctg	agcttaccag	ctgattggca	gctggaggat	tggtgtcagt
1620	gccatcttga	gcaaggctct	tccccttgat	aggtctggct	ggcctcacca	ttatgatcct
1680	ccatccctgc	cccttaaacc	gttccatgac	tcctcctctt	ctccttgtat	gcagctctgc

1740 ctcctggcca ttgccatcca ctggggatag gggttctctt tgggacaaga gggggaggtt 1800 tcacatatac aggaagaatc tgcttgcttc ctgagtagga cagggggaact gggagtgggt 1860 tttccttaaa aggaaagggt ttaaggatgt gagggtaagc ggccagttgg gggtttggtt 1920 tecegageet eteacetece eageagetga atgggaatge teaggatgea eagetaacee 1980 agcactcacc tgagtgcccc gcacaggtat gtggaccgag tgactgaatt cctccagcaa 2040 aagctgaagc agtcccagct gctggctttg aagaaagagc tgatggtgca gaagcagcag 2100 gaggcacttg aggagcaggc ggctctggag cctaagctgg acctgctact ggagaagacc 2160 aaggagetge agaagetgat tgaagetgae atetecaaga ggtacagegg gegeeetgtg 2220 aacctgatgg gaacctctct gtgacaccct ccgtgttctt gcctgcccat cttctccgct 2280 tttgggatga agatgatagc cagggctgtt gttttggggc ccttcaaggc aaaagaccag 2340 gctgactgga agatggaaag ccacaggaag gaagcggcac ctgatggtga tcttggcact 2400 ctccatgttc tctacaagaa gctgtggtga ttggccctgt ggtctatcag gcgaaaacca 2455 cagattetee ttetagttag tatageggae ttaataaaag aggaaaaaac tettg

<210> 27

<211> 2262

<212> DNA

<213> Homo sapiens

<400> 27

60 gtatagatgc atcacagttg gctcattcat ccacttcttg atgggcattt ggcttgtttc 120 caggittitig cigitticaga cacagcitic atagatiget tietticigi atetgageet ctttctaggc ttctaggaaa gcagtgtcct tccttttttc cttctttttg gattggattt 180 240 cttcctgctg aggtcttggg tgtctggttt ggacatggct gtgggtctac ctggagtctg 300 agctctggcc tgatacagag gggtaggagt ggtgaggagg gcagtgtcca aggcaagtcg 360 aggctgggac atggcgtctc tcttgttggt cagtgagctc tcggtccctg tgggtcaatg 420 ccttcattca ttcttggcga gtctgatttg caggcttggg ggccaagcaa gccactgtgg 480 accetcagag cataccetta tttattgact ccactcacgt cctaggtggg tagagatgat

540 tcctgggaga gctgtcctca gacagcccag gctgtgattt ggaagggccc atccatcctt 600 ctgaccagtg gtgagttatt tggggaccca ggagatgagt gcaggcttga tgctgagact 660 tagggtaatt cattgcccag agtgtctgct gtctttgctc tccttctaaa gtggctggca 720 taattagatt ggggacttgc ttgtcttttg tgatgtacaa acttgtctct tctggtattg 780 acaacaggct gtttgacttc acagatgggg gtgggcgtgg gaaacctaag cgtgatactc 840 atctatatag ttctgtctgc agttggttat tggaattggg ggactgcgtt ccctagcact 900 tctagatgtc ttgccccaag agagactctc ggcaggctca acgtgtgctg tgatcattgg 960 agcttctatt gaacaggatt gccctgaaat ggagggtgaa tggcaaccgt tggatatctc 1020 cgcgtgcgca cctgcttagg tggaagacaa gaaacggtgc aggaaagccc ctttcatttt 1080 atttattttg gtctttgtcc agcattcaaa gttaactcaa cttttcagaa aggttttata 1140 tatgagtggt gagagcagag tcgaccaaga tgttgcttat gatcatcctt gaaatttatg 1200 attaaaaaaa gaagataaaa tttgcaaaga acttgctgcc ttggcagctc ccaagagaat 1260 tcagttcctg aggttgagag ggagctggtt ttagggtgct ttcccacgga gagctgccgg 1320 agggeteete tgtgettetg tagacaatet geaggeeaga catteeaaet gtetteaega 1380 aataggttct ccttttttct ttgccccac ctgggagagt ggggccagcc tggcagcaat ctcaccaagg gagtagcagg atcaacaggc tgttacagtc tgtcctaagt tgaaaagaag 1440 attaattttt tttaagttac agtttcaatt aaaggaagat ggaggaatgt aataacatgc 1500 aataagattt atgataagta caaactgtgc ttgaatacct acatttaaag catttcatgc 1560 1620 tttcagaagt aatagagctg tgggcccaaa gacgggatgg aggagagaag agggtaacat 1680 ttcaaaggtg ccctctttt gtactgttaa tggttatttt gatggattac ttcatagacc 1740 aacgagttga tgactggggg tccagagtgt gcatgattga tgtagatgat tgcgttagaa 1800 gatgattacc tagttattgc agtgtttaga accaatggaa gaaaaatgct ttgaaaatga caaattccac aaattataca aagtttctaa gaagaactcc tggagattat ttatagaagc 1860 1920 tctggtaata taggatgagt gtggccagag tagaaaaaaa tctactttta tcaaagcaaa 1980 attatttaaa attccatctc acaattatac attaaagaat tttataacaa tacaaatttt 2040 ggccaggcat ggtggctcat gcctgtaatc ccagcacttt ggaaggctga ggtgggtgga 2100 tcaccagagg tcaggtgttc gagatcagcc tggccaacat gatgaaaccc tgtttctact 2160 aaaaatacaa aaattagctg ggcatggtgg tgagtgccta taatcccagc tactctggag 2220 gctgaggcag gagaatcgct tgaacctagg aggtggaggt tgcagtgagc caagatcgca

ctattgcact ccagcctgga tgacagagtg agactccatc tc

2262

<210> 28

<211> 1894

<212> DNA

<213> Homo sapiens

<400> 28

60 attatttaaa gggaccacag agtgtccaaa agcaggcgag agctggagag tttgctccta 120 taaagcagca gttgcagtgg gtttgaactg ggagcctgtg gctttcttgc caaagggttt 180 ttcataatct ccacactaca gtggtatgag acatagtctt tattatcctg aggtggtaga 240 ggagatagtc caggacttaa agaatactgg aaatttaaca ggaaaatccc agaagcaaga 300 aaactaccaa gtggtgaggc ccgaatctga gcaggaactg cccaaatctc aggccgacaa 360 ctaaactaca catgcacagt ggcaatccca gagaacctgg caaaagggta agcagagacc 420 aaagagaaat ctacccctga aagacggggg aaccatgtga gatttttaag ttttttgctt 480 ttcaactgag gcatttcccg aactgctgca gcacagatga cagaaagcag ctgcctccct 540 gccttgcgat gggtatcagg gctgctggga attgaggcgg gccaggggtg tgggggtccc ctgaagcaag ggaaccatag agaagacaac attagagtgt ccataaaaca tcctaaggaa 600 660 cccacagaga acccactaga actaataagt aaagttagca aggttgaaga attcaaggtc 720 agtatacaaa gaccaattgt atttctgtgt attagcaata aacaattgga aaatgaaatt 780 ttaaaaattc aatttcatta gcaatttcag tagcatctaa aaactcgaaa tatggaggaa 840 taaatttaag aaaatatttg taggacatgc acattgataa caagccctaa ataaaaatag 900 aggtggactt tgctcatgga gtgttacatc agttctccca aaactaattg ataatttcag 960 tgcaatctct ggtaattata gcagattttt ttttgtggaa attgagaagc tgaatctaaa 1020 accgatatgg aaatacaaat gagtaagagt agccaaaaca gtaagttact catcccagta ttaagactgt gcagctacag tgatgagagt gtagtgctgg taagaggact ggcacgcagg 1080 1140 ccagtggggt ggaatggagc ccggaaagtg aaccacaaac ttttggttca cagaggtacc 1200 aggataattc aagggggagg aattgtctta tctacaggtg gttctggcaa cagagtattc

1260 acaggaaaaa tggtgaacgt taacccttgc atcatatgca aaaaattatt tgaaaacaggt 1320 cataagaact aaaaccatca aacttctagg agaaaataca gggaaaaatc tctgtggcct 1380 tgaccatgca aaaatttctt gggacacaaa aagcatgagc cacaaaagaa aacgttgata 1440 ggtgggatct catcaaaatt tcaaactctc tttctttgaa agacagttaa gaaaataaaa 1500 aggcaagcca cgccctccaa aaatacatgc agtacatata caggacaaag gacttatttc 1560 tagaacctgt aaagaactct tagaactcaa taataagaaa acaacccagt aaaacaatgg 1620 gcgaaagatt taaacatgca tttcccagaa ggtatatgag tgggcattaa gcacacacag 1680 ggtatcatta tttatcaggg acatgcaaat tcacccatga gctacctgaa catacttgct agaatggtta aaatgaagaa gagacagtct tcattgttga taaggatatg gagcagttga 1740 1800 aacgctcaca cgttattgat aggaatgtaa aatggggcca ggtacagtgg ctcatgcctg 1860 taatcccagc actttgggac gccgaggcag gcggatcact tgaggttagg agtttgagac 1894 cagcctggct aacgtggcga aacctgtctc tact

<210> 29

<211> 2486

<212> DNA

<213> Homo sapiens

<400> 29

60 taccttccct ggagccacac tttgcccagg tgcctcagcc ttctgtgagt agcaacggta 120 tgctctaccc tgcactggcc aaggagagtg gatacatagc ccctcaggga gcatgcaaca agatggctac cattgatgag aatgggaacc agaatggatc tggcaggcct gggtttgcct 180 240 tetgecagee ettagaacat gaettgetgt eeccagtgga gaagaaacea gaagetaeag 300 ccaagtatgt cccctccaaa gtccatttct gttcagtgcc tgaaaatgag gaggatgcct 360 ccctgaagag acatctcaca cctccccaag gcaacagccc acattccaat gagagaaaga 420 gcacccacag taacaaacca tcttctcatc cccacagcct caaatgccct caggctcagg cctggcaagc gggtgaagac aagagatctt ccaggctctc agagccctgg gagggcgatt 480 540 tccaggaaga ccacaatgcc aacctctgga ggaggctgga gagagaaggc ctaggccaga

600 gcctgtcagg caactttggc aagaccaagt cagccttctc atctctcag aacattcctg 660 agagtetgag aagacacage ageetggage taggeeggg aacceaggag ggttacceeg 720 ggggcaggcc cacctgtgca gtcaacacca aggcagaaga ccctgggagg aaagccgctc 780 ctgacctcgg gagccatctg gaccggcagg tttcctaccc gcggcccgag gggaggaccg 840 gtgcctcggc ttctttcaac agcacagacc caagtcccga agagccgcct gcccctcgc 900 accegeacae atceagtetg ggccggaggg ggcccggccc aggcagcgcc tcggctcttc 960 agggetttea gtaegggaag ecceaetget eggtgetgga gaaggtetee aaattegage 1020 agcgagagca agggagccag agaccgagtg tgggcggctc tggttttggc cataactata 1080 ggcccacag gaccgtctca acttccagta cttctgggaa tgacttcgag gagacaaaag 1140 cacacattcg tttctctgag tcagctgaac ccctaggcaa cggggagcag cacttcaaaa 1200 acggggagct gaagttggaa gaggcttccc ggcagccctg cggtcagcag ctgagcggag 1260 gagcgtcgga cagcggccgt ggcccccaga ggccggacgc tcggctcctc cgtagccaga 1320 gcaccttcca gctctccagc gagccagaga gggagcccga gtggcgggac aggcccggct 1380 egecegaate geceetgetg gatgeeecet teageegege etaeeggaae ageateaagg 1440 acgcacagtc ccgtgtcttg ggggccacct cctttcgacg tcgagacctg gagctggggg 1500 cgcccgtggc gtcgaggtcc tggcggccac ggccttcctc ggcccacgtg gggctgcgga 1560 gccccgaggc gtcggcctcc gcctccccgc acacgccccg ggagtggcac agcgtgaccc 1620 ctgctgaggg cgacctggcc aggcccgtgc ccctgccgc ccggagaggt gctcgccggc 1680 gcctgactcc cgagcagaag aagcgctcct actcggagcc cgagaagatg aacgaggtgg 1740 ggatcgtgga ggaggccgaa ccggcacccc tgggcccgca gagaaatggg atgcgtttcc 1800 cggagagcag cgtggccgac cggcgccgtc tcttcgagcg cgatggcaag gcctgctcca 1860 cgctcagcct gtcggggccc gagctgaagc agttccagca gagcgccctg gcggactaca 1920 tecagegeaa gaeeggeaag eggeetaeet eegeegeegg etgeageete eaggageeeg 1980 ggccactgcg tgagcgcgcc cagagtgcct acctccagcc cggccccgcg gcgctcgaag 2040 gctccggcct cgcctcggcc tccagcttga gctcactgcg ggagcccagc ctgcagcccc 2100 gcagggaggc cacgctcctg ccggccacag ttgcagaaac ccagcaggct ccccgagatc 2160 gcagcagctc cttcgccggt ggccgccgcc tcggggaacg gcgacgcggg gacctgctta 2220 gcggagcaaa cggtggaaca aggggcaccc agagagggga tgagaccccc agggagccat 2280 cctcctgggg ggccagggcc gggaagtcca tgtcggccga ggacctgctg gaacgctcgg

acgtccttgc gggccctgtc catgtgaggt ccaggtcatc tcccgccacc gcagacaagc 2340 gccaggtacg tgcaaccagc aagtcctggc ctcgaactgt cccttcctcc ctagaagctt 2400 tagtggggct ccccaacccc ccacactctc acccgctctc ccagttcagt tttccttgtg 2460 attacagaaa agtagcattt gttttc 2486

<210> 30

<211> 3164

<212> DNA

<213> Homo sapiens

catttattat	tttgttagtc	tctattcatg	acaaagcatc	accatttttc	acacacgatt	60
gcaacacaat	ggtaaagtaa	caaataccaa	atccaatggt	catttttcag	ttcatctcat	120
gtgacctttc	tgctgtattt	aatgttctta	atttctttat	ttttagaaac	agagtctcgc	180
tatgctgccc	atgttggtct	caaactcctg	gtctcaagtg	ctcctgcctc	ggtctgccca	240
agcattggga	ttacaggcat	gagccactgc	tgcctggcct	atgtttaatg	ttcttgactg	300
gtcttctctt	aaactctttt	aatttggctt	ccttgattcc	acttgcccct	gtttctctgc	360
tacctcccag	agaattgctg	tgcccacctt	tgttcccaaa	ttatgggcat	gtcattaaag	420
cttttttcc	taggccactt	ctacctagat	gtgactatct	ccacagctca	gatctcatct	480
acactccaga	cttacttcag	actgtcttct	gaagtttta	ttgatggact	aatggatacc	540
tcaggctgac	tatatgatta	attaaattcc	tctctgcact	tttttttt	ttttgagaca	600
gagtcttgct	ctgttgccca	ggctggagtg	cagtggcatg	gtcatgactc	actgcagcct	660
caaattcctg	ggctcaagcg	atcctcccac	ctcagcctcc	cgagtagctg	ggaccaaggc	720
atgtgcccct	acagatggct	aatttaaaaa	attttttgt	agagacagtg	ttttcctacg	780
ttgcccagcc	tggtctcgaa	cttctaggct	caagcgatcc	tcctacctca	gcctcccaaa	840
atgctgggat	tacaggtgtg	agccactgca	cctagccctc	aaactcttaa	gtgttcttcc	900
atccttgtag	cttacttact	gtaccaccag	agttatgtgg	aaaatgatct	tatcatgtcc	960
cttgccactt	aaatcagtag	acctgtatct	gcaggtaaaa	gatcaaactc	tctagaagga	1020

1080 tagccaaagc aattgggatc ggtttctaat ctttacagat ttatccctca tcatttaata 1140 tttaccctgc tttctaacaa aactgagcta cttgcaattc ctttaaagca acatgaatgt 1200 tcacattgtc agtctaatcc ctctcttcat cagatgcttg gtcacccact tatttatcag 1260 taatgataac attcactaat ttatatgcac ctactttgtt ctggcttctt actaggcaga 1320 1380 tgcagataga gccaaggccc aaataggcga acaaaggttc aaattatgtt agcagctggg 1440 gataataatc tgcgctctca atgaacttaa ggttcagtag agaagacaga cttaaaaatc 1500 aacaaataca catttaagaa ataactgtat ttgaggtatt tataattttt gaggtaggta 1560 taattaaagt atggggacaa aagtgggaaa agacatttca cagagtaagt gcaccttgaa 1620 ctggtcttca agaataagta ggaagaagaa tgccagccaa agggaaacag ctggagcgca ttcttgagaa aaacacgtgc aaaggcacag aagaatcatg taaaactgct aataattttg 1680 1740 cttggctaga gcaggagagt gatctaggta gataaacttg aatgtagata tagttgtgag 1800 aattagatct gggagacaaa tttaacccag agaccccca tattcaacac caggtctctg 1860 gttttggtga ctggatagat ggtagtagta ttttctgatt ctgggaattt tgtaggcaaa 1920 gcaaatttta gagggaagat gatgagctct gttatggaca tgctgagtgt gaaaagcctg 1980 tgggatatcc atatatttat attaagataa ttgaatatag gaaactagag ctaagaagag agaagcttga gggaaatatg gatttgaaag ttaccagtat gttgggacca cagcagagaa 2040 2100 tatgaagatt atatagcaaa atagaggtca aggaagtagg aggagaatta agacaagtga atgagtttca agaaagggta tatagtctaa aagtagtctg agaacaagaa acagccctct 2160 2220 ccatctccag tttccgcatc tccagtttct ggcaaccact ctcttcctta gctccctaaa gcctaggaat gctaatggag cacattttat gctggttcta cacacgtctt tatgatagca 2280 2340 cccctacacc ctgtccacac ctttgtaaat attctcttta tcaaattatc ccagtttgag 2400 tatatcattg attcctgctg gaacccatat aatgaagtta tattttaccc tatggtgagt 2460 atggggagac acataggaat tgtaagaaag agagatactg atcagatttg cttttcagaa 2520 agattattgg tgatgattcg aagaatagat tagagaggtg taatactgga agcaaggaga 2580 agaagaagta ggaaacttgc acaaggacca aagaagatac aggcttaaaa tgggctggga 2640 ggagtagaga gggatttaaa ttttagtgat gttagaaaaa aagaattcta gcactcagtc 2700 actgagtgtt agggttgatg aaggaagaat tgagaatgtc tcctaagctt atgacttgag 2760 tgacaaggga caagctggta caattaacca tactggtaat aaagaattaa ttttgaggga

aagatagagt tcacttttgg acatttagaa tgctgggaag atacctaaag gtttatgccc 2820 aagagataga tatagtgacc tggagctaca ttgtctgata gaatattctg tgataataga 2880 aacgtttcat acttatgctg tccgatgtgg taactagtag ccgtatgtgg cttttgaaca 2940 tttgaaaatg ttgctagtgt gactgaggaa caatttaaat tgtatttaat tttgatttag 3000 ttaaatactc acatatgctg ctttattgaa caatgcaggt atagagctga gaacggtttt 3060 tgcacttttg aaggattaaa gaatcaagaa tattttgtga tattaaaatt atatgaaatt 3120 tagaattcaa tatgtagaaa taaagccatt tttaattgaa acat 3164

<210> 31

<211> 2574

<212> DNA

<213> Homo sapiens

<400> 31

60 cagcataatg cgaggcaatg tccagccgtt ccacccggca tacaagctta tggagcagcc 120 ccctttgaag atctccaggt ggacttcaca gagatgtcaa agtgtagaga tcttcttcct 180 agatttgaac tgcccttacg gatcggctca gataacaggc cggcatttgt ggctgactta gtacagaagg cggcaaagat attacggatc acatggaaac tgcatgctgc ctactggcct 240 300 cagagttccg gaaaggtgat cgagtgtgga tcaagaactg gaacgtagcc tctttgtgtc 360 cactgtggaa aggaccccag actgtcgttc tgagccctcc caccgctgtg aaggtagaag 420 gaatcccagc ctggatccac cacagccatg taaaacctgc agcgcgtgaa acctgggagg 480 caagaccaag cccagacaac cctttcagag tgaccctgaa gaagacgaca agccctgctc 540 cagtcacacc cggaagctga ctggtccacg cacggccgaa gcctgaggaa gctcatcgtg 600 agattcattt ttcttaaatt ttggacttat acagtaaggg cttcaactga tcttactcaa 660 actggggact gttcccagtg tattcatcag gtcaccgaag taggacagca aattaaaaca 720 atctttctgt tctatagtta ttatgaatgt gtggaaacaa taaaagaaac ttgtttgtat 780 aatgccactc agtgcaaggt atgtagcccg agaaatgacc gacctgatgt gtgttataac 840 ccatctgage cctccgcaac caccgttttt gaaataagaa taagaactgg ccttttccta

900 gatgatacaa gtaaaataat aactagaaca gaagaaaaag aaattcccaa gcaaataact 960 ttaagatttg atgettgtge agecattaat agtaaaaage tagaaatagg atgtggttet 1020 cttaactgag aaaggagcta aagagtagaa aataaatatg tttgtcatga gtcaggggtt 1080 tgtaaaaatt gtgcctattg gccatgtgtt atttaggcta cttaaaaaaa gaacaaaaag 1140 gaaccggttt atcttcagaa gggggaagcc aacccctcct gtgctgccag tcactgtaac 1200 ccactagaac taataattac caatccccta gatccccgtt ggaaaaaaggg agaacgtgta 1260 accetgggga teaataggae agggttaaac ceteaagttg ceattgtaat tagaggggag 1320 gtccacaagt gctctcccaa accagtattt caaacctttt atgaggagct gaatgtgcca 1380 gcaccagaac ttctgaaaaa gacaaaaaat ttgtttctcc aattagcaga aaatgtaatt 1440 ttcttactta cataactgtt acttcttgtt atgtaagcgg aggaaccact atcggagaca 1500 gatggccttg ggaagcccaa gagttggtgc ctactgatcc agctcctgat ataattccag 1560 ttcagaaggc cgaagctagc aacttctagg tcctaaaaac ctcaattatt agacaatact 1620 gtagagctag agaagggaaa gactttatca tccctgtagg aaagcttaat tgtataggac 1680 agaagttgta taacagcaca acacagacaa ttacttagta gggcctaaac cacactgaaa 1740 agaatccatt tagtaaattt tctaaattaa aaactgctta ggctcatcca gaatctcatc 1800 aggactggac ggttcccgct ggactatact agatatgtag gcacagagcc tacattcggt tacctaataa atgggcaggc agttgtgtta ttgacactat taagccatcc tttttcttat 1860 1920 tacccataaa aacgggtgag ctcctaggtt tccctgtcta cgccgcccga gaaaagaaag gcatagttat aggaaactgg aaggagaatg agtggccccc tgaaaggatc attcagtatt 1980 2040 atgggcctgc cacatgggca caagacggct catggggata ccgaaccccc atctacatgc 2100 tcaattggat catacggttg caggccatct tagaaataat tactaatgaa actggcagag 2160 ctttgactgt tttagcttgg caagaaaccc aaatgaggaa tgctatctat cagaatagac 2220 tggccttaga ctacttgcta gtagctgaag gaggagtttg tggaaaattt aacttaacca 2280 attgctgcct acaaataaat gatcaaggac aggtggttaa aaacatagtc agggacatga 2340 caaaggtggc acatgtgcct gtacaggttt ggcacgagtt taatcctgag tccttatttg 2400 aaaaatggtt tccagctata gcaggattta aaaccctcat tgtaggtgga ctgctagtga 2460 taggagettg cttgctgctc ccctgtgtat taccettgct ttttcaaatg ataaaaggtt 2520 ttgtagctac tttggttcat cagaaaactt cagcacacgt gtgttatata aatcagtatc 2574 gctctatctc accaatagac tcaaaaagta aagatgagag tgagaactcc cact

<210> 32

<211> 1934

<212> DNA

<213> Homo sapiens

<400> 32

60 cgcacagcac ggtaccggcc ttctcctgtc cttgggggaa gcaggatggg cctctggctt 120 ctaagetgea caagtagtte acceetaate teaageecea gaagteaagg gaggggeaat 180 cagacctgtg ctcctagccg agggtgtctc aacagtggcg tgattggcat ttggggtgaa 240 tgattctttg tcatgggggc tgtcctgtgc atccacggtg tttctagcat cctaacctta 300 cacccattca atgccagtag gagccccct ctccagtggt gacaaccaaa atgtcttcag 360 atattgcaaa atatcgcagg ggagggtcaa gattgtcccc agtggaggcc cactgcccca 420 gaccttactt cctggtccta cttctgtttt tacggcaaat aaaacatctg accaatgaca 480 tggggccaca gtggtggtgg aggacacctc gcagcttctt cgccatatag aaccctctgg ccaaatgcca tcgtatggcc ttccccactc tctttcaccc gatgccccct ctgctgatct 540 600 tectecega caaccagetg ggagtggate ceateceaag etgtgeetge ageteagett ccaatcaggg cacttgtgtt gagggcttcc acctccaggg agccctcccc tcagtccact 660 720 ctgctctctg cagcctctga accaccccc cccacccagc actgtgacaa gcgtcacacg 780 tgcctcgggg tggctgatcc catttccttc ctcagaatcg catgtggcgc aagactcggt 840 cccacacage aggetecete tgtattggeg tggaceceaa caggaactgg gacgetgget 900 ttgggtgtaa ggcccagagt gtcttgggag caaggatggg atggcctcga atggctcctc 960 accactgctc ttgctccccg cctctctcct gcccctgcag tgaggggagg gttgggggtg 1020 gcagctctgc ctctgagggc tcttggggat ggaggctgtg ctctgagagt tggttgttac 1080 tcgcctgcaa aaggcaagtt gcttgcaaat gggctaaggt ctgaaatcct acctaggggc 1140 cttctagctt aacctcaagt cctcccgcct tggccacgtc tctgtgagaa ctggtctcca 1200 ctgaggagcc cgtcttccct ccctgggtgt gtccatcagc tctgcccaaa ccaggctggg 1260 agggcagttc ccccaggtta tagaaggcct ttgggctttc ctgaatccag gggtgggagt

gagcccttcc	ataccacctc	accccaact	ccatgcaaag	aactggattc	cagaagccac	1320
agaagctgga	ggagccacac	cgccatgccc	tctgtccccc	cacagtgtcc	ggagccagca	1380
gtaacccctg	ctcggagact	taccacggca	agtttgccaa	ttccgaagtg	gaggtcaagt	1440
ccattgtaga	ctttgtgaag	gaccatggga	acatcaaggc	cttcatctcc	atccacagct	1500
actcccagct	cctcatgtat	ccctatggct	acaaaacaga	accagtccct	gaccaggatg	1560
agctggatct	gctttccaag	gctgctgtga	cagccctggc	ctctctctac	gggaccaagt	1620
tcaactatgg	cagcatcatc	aaggcaattt	atcaagccag	tggaagcact	attgactgga	1680
cctacagcca	gggcatcaag	tactccttca	ccttcgagct	ccgggacact	gggcgctatg	1740
gcttcctgct	gccagcctcc	cagatcatcc	ccacagccaa	ggagacgtgg	ctggcgcttc	1800
tgaccatcat	ggagcacacc	ctgaatcacc	cctactgagc	tgaccctttg	acacccttct	1860
tgtcctcctc	tctggcccca	tccaggcaac	caaataaagt	ttgagtgtac	caggaacaga	1920
atcctggggc	ttgc					1934

<210> 33

<211> 1875

<212> DNA

<213> Homo sapiens

ccggtagaag	ctaggccttt	agaagacacg	ccctgagttc	cttctctgtt	tgatttttcc	60
aaggggaagg	gcagatctga	taactgaacc	taacctattc	tctcctccag	gttggttagg	120
acctgataga	atctgggcca	gacacccaga	ttcccaccct	caggacaacc	caccctccgg	180
ctgacagccc	tctctacgta	gctccctctc	cccaaacgcc	tctgcctccc	ctggcctcca	240
ggcctagcct	accccatcta	ccgctctggc	tccagcctga	gcccccgcc	ctcctcgggg	300
aacagatggg	agctggcgga	ggctctcagc	acgggctccg	ccaggtgtcc	aggatggaga	360
tgggaggagg	cccgtcgggc	tcggctatgt	gcagtgaagc	tggggttggg	gtaaggactc	420
cgccccaggg	cgcaggtgcg	cagtcctggc	taggcagcct	gccagggtgc	ggagcgggag	480
cgggtccttg	ggctgcactt	gggcggcgcc	ggatcggacg	cttggcactc	tgggcggccc	540

cccggcggag	tggtggtccc	aggagaacct	ccgaggtggg	agggtcccgc	ccgcatagag	600
ggatgttctg	gagaagccgg	gagcagagtc	cgcgggcacg	cggtgggcga	gggacagtgc	660
aggtgccggg	tgcgggggtc	tccgggacag	tccccggcac	gcgctggtcc	gccgtggggc	720
cctgcggtga	gcggcgcccc	ctggcgcggg	ggaggaggac	ggaagcggga	ggtgagggcg	780
aaccgggaag	agggacggtg	gtccccggcg	cggcgctccg	cgtcgggacc	tggaggagct	840
gcgccccctg	gcgcgggggc	ggagaggcgg	gcgagaggcc	ctggctctta	cctcccgggg	900
tcccgcgggt	gacggcggca	gcggccattc	tacccaacac	cgacccccc	ccagcgccgg	960
ctgacagcgg	cgtctaacgt	cactgcgcac	ggggcggggc	ctcccaatta	aggggatgag	1020
ggtcaggaag	ggaacctggg	gtcagcacac	gtggagttct	gggtggggcg	ctgggcagag	1080
ggactcggct	tctagggctc	tgagccaggc	cgagggacag	actgctggga	agtccccaaa	1140
agggcagcag	cactgagggg	caggattcca	gggtcctgga	ggcggaagct	cggccgactg	1200
actcccagtt	cgagagaacg	gggcgggggc	agcccaccag	tgctggaacc	cgaggggccg	1260
ggcgaggaac	gctggactgg	gagcaggacc	cttctcgcct	cggacaagac	tccttgtctg	1320
gggacccagc	ccgacttcat	tgtagctggg	tcctcgagaa	agcgaaagga	gccctccttc	1380
cccattggcc	tctccatcgc	tgcatcccaa	gaagaaagac	aactcgggct	ccacttgctt	1440
gctttttaat	aacagagcag	agagaataca	aggccaggag	cggggcctgg	aggaaaacag	1500
gacttggggt	gctcctgtga	gagcggtggg	ttgagatggg	agcccacggg	ggctgttaat	1560
gcctagttca	gaggatggga	aaggcagttg	gagagacgaa	ggaaggggaa	acgccttcat	1620
gtcagcaatg	agggtgactc	tagtgacgga	actagtcttg	ggtccctggg	gcaccactag	1680
cctctcggca	tcggtggttt	ctccttactc	ttcagacgct	gccaactcca	tccccaggg	1740
attgtgaagg	gggttccttc	tggctgtgac	agtgctgaac	gaggccagag	agtgcagctg	1800
cctggaggca	caagcctcct	cctgatccag	ggggctccag	ggagaccaaa	gcagctgtca	1860
agatgagaga	aattg					1875

<210> 34

<211> 2879

<212> DNA

<213> Homo sapiens

gttttgtttc	actaagatga	taaaatagag	agttaaagca	gaagttccat	gtctgaacaa	60
ttaacttgtg	aaaaggcaaa	tgtagtagaa	aagagacatt	aggcagatgg	ctgtgcatgt	120
tggccacaca	gaagcagcat	tggccatgac	cagtgtgggt	cctggttagg	ggaagagaac	180
tgggtttgac	aacaacaggg	tatctctgag	gttataaaaa	gttgggttct	gatcatttgg	240
agatgaggtc	cctatggata	gggcaccata	tctaaaggtt	caccatttac	attgcaaata	300
tacattcagt	tctctgagag	tgagcagaga	aggcagaggt	tctcagtctt	ctgacaaggt	360
cctggagcat	caggggagag	cccattctta	caaaactcca	caccagcatg	caagccctta	420
catgcacata	agcactcaca	acacaccaag	agcctccagg	tgacatctgc	cacctccaaa	480
tccccatatc	ccacatgctc	aatgcacttg	cagtctccat	ccccagcag	actgcaaatc	540
tgacatgcct	catccgaacg	gcaaggggga	gaggtacgta	tggtacacac	actgctgatg	600
gcataggccc	ctttggaagg	ggtagtgtga	gtctcttggg	gctatggcaa	gcacccctgg	660
acaagcagga	agagaggtgg	tggaggcatg	tctcacggta	gcatctcctt	ctaggtccta	720
atgggacact	tcattaatgg	aactaccatt	taagtgagtt	taaactggat	gcttctgatt	780
gagccccaga	gccagtgctc	cactgccacc	acctgcaccc	tcacttcccc	ttgtttaagc	840
atcttccaac	ccagtaaggc	tgaagaggga	agcttcctgc	cttcccactt	ctcttagcag	900
agtagattga	tatgattatt	cagattgtac	aagaatctat	tccctctgaa	gtattgcttg	960
atgaatgagc	ccctttttct	aatttgctca	aagaaatcat	ttgagcttga	ggaaaactgt	1020
ccagagggca	cgaggaccag	ccgttgtgat	atgtaacaag	gtagagaaac	aaaagctaaa	1080
tgaagaagag	tgagcctcag	aatcaaagaa	ctggatttgg	atccctttaa	accattttac	1140
aggggcctga	atgtaattaa	cttctctgaa	attcagtttc	cttatcaata	tgctggtgat	1200
aagtgactat	tgtttgaaga	cagcataagc	aaagcatgca	gtacttagga	gatgtgttct	1260
tccttcaatt	cctctattat	taaaagatgg	gcacagggca	ggggcttcag	ctcagaaggc	1320
cttgttgaga	atagaatgga	gagcaggaac	aagagagagg	ggcaaaggca	ttgccagcat	1380
tctctgttcg	gctgttctcc	acccactgcc	tttcctcctg	cttccctcta	agtccagggc	1440
attttccctt	ttgataaact	tcccctttta	caacccatcc	aagggtgaaa	aacaaagtca	1500
ttactttttt	ttcagtacct	ctaaggcaaa	gcagcagaaa	caggcagtca	ccactacgaa	1560
taagtgacta	caacaagagc	taggccaaac	tctgccatgt	gggctgcatt	ttattgggcc	1620

1680 ggcaagtaac tttaaatccc agctcacact ctactgagtg aaagtctgat gaacccgcat 1740 cttcttgtga acaactgcgc ctgagatcag tcatgcaaga agtagcaccc ccaccccag 1800 acaactaact teccaggetg tgaccaacaa geagecaaga ggecaggaca gggaagtete aggacctttc taggaaatca atacctttct ctgggtttgt tctgcctgaa ataataccaa 1860 1920 tctccctcca acagcttagc atgtgtggag catttgatac taacagcaac cctgcaaggc 1980 aggaaggcag tagggagagg cccaagagga attcagcatt aaggcagtga gactgacaga 2040 ggggaccccc tgaggacatt ctggaaggtc ttagccaggg ccaggatgca gacccttcat 2100 gtcactgtag ctgagacaag gtgcaaggtt cacagcatat aacctaattt tattacaaga 2160 atgaagactc agagtttaaa tactcctgct ttggggctca ttagtaacaa gttctccaat 2220 attcaaaagg caaagtggat gtgttttagt gtaaaattaa cactagctgc tgtaacaaat 2280 aagccccaa acatatgata tctcaaacac cgtaggttta tttctcactc acatcagagt 2340 caaaatggat gtttctaacc tgcagctggg gcttctccca gcagtattcg gggcactttc 2400 catcttgtgg ctccaccgtc tgtaatgcag gactccaagt ggcggaagag gacggagcag 2460 aggagtcaca catgggtgtg tgtctggccc agggtggaag tggatgtgca tttcttctgc 2520 ccacctcact cacaaggcca cacccactg caagagaggc tggagaatgc ggactggatt 2580 taaacccaag aagaagaaat ggttttctga atagttggcc atttactgac acaaaaaggg tcaaagtgac ttgcagagga gatgaatttt aaatactata attatttcct tggctgccct 2640 2700 ttagacagaa tttatttctt tttcttttcc agttaaacct gaggctcctt ttgacctgag 2760 tgtcatctat cgggaaggag ccaatgactt tgtggtgaca tttaatacat cacacttgca aaagaagtat gtaaaagttt taatgcacga tgtagcttac cgccaggaaa aggatgaaaa 2820 2879

<210> 35

<211> 1927

<212> DNA

<213> Homo sapiens

60 catagataga tagatagcca ggaatatgtc ggtgcttttc gaagctctta ttccccaaat 120 tgtctccttc cccagccctt cctcccaagg tttttggttt gtatttttgc cccaactgtt 180 tttccttgcc cccaggaacc agaggctaat aatgtccttt cctttaaatg ttttcaaggg 240 aagttccaag ttaggcaaaa taaatgtaag tcctttgggc tcatccttca gagagccacc 300 agacaggtaa aaataaacaa tttttattgt ttattctttg acaataagaa ataggccccc 360 tttgcttcct cagtactagg aaaccatact gggaatatgg gttatcttca aagctgttgc 420 tgagcaggag acagagccag cacaagttaa aacactacaa agccctttta ctgggactca 480 gggagttttt tgtttccttt ttcctcatta agggtttgcc gggttactat aaacttttga 540 ttagttttga gagttccaac agttgattct gacagatttt gctggttaat ttgctgcttt 600 cgtggaggga caagcttttg tcattgttta ttatactatt ttcactgaca taccctctat 660 ttttttaaat gtgggttgca gcctactaat gaattagtct ctacggtttg aaaaaattgt 720 ctgatatcct tgttgttcta aaaaatatat gaactaagta gttaggggaa ttccattcta 780 agagtatgtt gatttaactc tgttcacttc aacaaagaag tctgaaaata taaccgaagt 840 tttgtttcac cagccttcaa atgtcttggc aaaattgagc acactgctta ccatgtgtgt 900 tattaggata tccaggagtt agtgatatag gatcccaatt atagatgtgt tcatgtccac 960 aaagtcctcg tacttaaggg atatttgtac tgtgcaattg cttcttagaa tgatgttgct 1020 gatagactgt cttgtccttt gcttcagctt tgggacatcc ggaagaaagc agccatccag 1080 acatttcaga acacgtacca ggtgttagct gtgaccttca atgacacaag tgatcagatt 1140 atttctggtg gaatagacaa tgatatcaag gtctgggacc tgcgccagaa caagctaacc 1200 tacaccatga gaggccatgc agattcagtg actggcctga gtttaagttc tgaaggctct 1260 tatcttttgt ccaatgcaat ggacaataca gttcgtgtct gggatgtccg gccatttgcc 1320 cccaaagaga gatgtgtaaa gatatttcaa ggaaatgtgc acaactttga aaagaacctt 1380 ctgagatgtt cttggtcacc tgatggaagc aaaatagcag ctggctcagc cgacaggttt 1440 gtttatgtgt gggataccac aagcaggaga atattgtata agctgcccgg ccatgctggc 1500 tccatcaatg aagtggcttt ccaccctgat gagcccatca ttatctcagc atcgagtgac 1560 aagagactgt atatgggaga gattcagtga agatatggac tggaagactc caaggccgct 1620 tgtctttgag acctcagact gcataagtga tgccaaatgt tggatgtcca ggctagcacc 1680 ctcccttcag atgaccattg ctagcaagaa acaggaggcg gtggccatat tccaaaaaacc 1740 acttetgtee cattteacea ggatgaetaa ggeaagetee etgtggeete taaaaaceae

ctgccagatt tcagggactt ttttttttt tctttttctt ttttcctgtt ttctaatgca 1800 ggcccaatgt gacaaatttg ttggttggga ttttttttt tttttgtaac tggcttgtat 1860 gatatttct ttctgtattt ctctatatca ttttgtatta aaagccaaat agatgccttt 1920 ttacaag 1927

<210> 36

<211> 2780

<212> DNA ·

<213> Homo sapiens

gtgtgtacac	ctgcagagtt	gtaacatgcg	ggcatttctc	ccctcagccc	gccattctgg	60
cttcttaact	tgcaccctaa	cagctcgaca	gaaccttggc	gtccacaaaa	aggacttgag	120
gtgggacatg	gaagaacagg	gacccctcct	ggtttgtcca	cccagcccac	acctccattc	180
ctcacccaac	ctaccacttc	agagccggga	aaagacctca	gagaacatcc	gctccgactc	240
taccgaggct	cagacaggac	aacaagagtg	tgctggacac	tgggaaatgt	ggtccaggag	300
cagtcacagt	ccctacagac	ctcccacaaa	ttaccgtaat	gcaaagagtg	ctcagcccct	360
gccgacatga	gcaatgggca	gcgcgtccag	ctgggttcct	gccccatgag	aagcacacag	420
cctggtttgg	taggtggggc	tccatcaggg	ctgtttggat	acctgggtgg	agcccacaga	480
ccagccccca	ccttgtgtgg	ttagggcttt	gctaggaagg	cccatctgtg	cgccatgacc	540
ttggaactcg	atgtgagatc	tctggaccgg	cagcagcacc	tggaagcttg	ttggaaatgc	600
tgatctcagg	tgggactcca	gaattcccgc	atctgcacct	gcactcccaa	aatacctccc	660
caccaggtga	tccgaggcca	tggggcagtc	tgaagggcac	tgtgctgggg	cgtcccacca	720
ctagaaatcc	agtccggtaa	tctgaagatg	taagtgcccc	caggaggagt	gacggagtga	780
cacaaatgac	acaaggggag	gggacttgtc	aggtgtccac	tcctgactgc	aagttcccag	840
ggcagaaggc	aatgccccca	cagggacttt	tccagacact	ccgagtgcac	ctgaattgca	900
ttttgagtga	tgctacctgc	taagcaggaa	gatccctcca	gagcctcgaa	aagcagagtg	960
gaagtggtgg	tgcccaggac	gcatgggctc	tgatgggaag	agggaggtgg	gcctgagcat	1020

1080 gggccttctt ctccccaggt cagaggggcc tggatgcccc tggagggaac actgaggtca 1140 cctctggcca aatcttcctg ttctgccagt acccagccct gttcagtgac gtcaagcttt 1200 tgggtccctg tcctggggcc ctccacgctg gccgggctgt gtagagacgc ccttctctc 1260 actitating gtccagating tigting tetecectee tetecageet ggggtetgaa 1320 aacagcgatg ccaacagaca gacagatttc caaaagaaag gtccggctca gccaaggaca 1380 aaggggcctt gcagaggctc ctgggggtca gaaagctgag agtctaccgg gcaggtgcct 1440 tctccaccca caggcacaag ctacaacagc tttccaagga gtgcatccac atcgtcccca 1500 ggtccagatg cccacatcgc cctgcaggga ccaagaccac actcgggctg cttggacagg 1560 atgtagctgg tcactgttct ggagctggcc cctctgtagc ctgtgacaat cagcttgagt 1620 ctctctgcca agtctccgcc ttctgttctt cttgccgacc ttgaagcaga gttgacgttt 1680 caggtttttc cagcagacaa agctcactca atctgatact gtggaggttg ttaatttaac 1740 aaccaaccca tcctcatgtt gagaaaccag ctccaaatgc tcacctggct gtcagggatg 1800 gggagcctca tcggtgaaag agggttgtga tggcataatt taaaccaaaa gaggcattcg 1860 eggttgeeeg tgttgeetea ggeetgetgg ceteetgetg tgaacatttt gggeaataee 1920 gtctctgcca gtgaccccca attgtccact tgtctccagc aagatcgaac catgtaagtg 1980 ccatttctga caagttgggt gaacgttggt ttcaaatcat cagctctgca ttcaagtgcc ctgctacaat tctggctcac tctgtgggaa taactgcctg cctgggcacg ttgctgttgc 2040 2100 tgcctcccaa acggcagttt ctggggtccc aggtcatcca ggctggatgt ggcttgggag agacctgtgg caccaggttg gagggaggtc tcacctctcc tttctgagct gtggactgca 2160 2220 gcttcaggac cctatggatg aggccgaatg tcatgaagat aatggaattt ggagtctcaa 2280 caaagccaag ccacatgcca gagattcacc acctggggcc caggatcaga agtgtgccct 2340 taggaggcca aacatccacc tgtctaccaa ctagacattt ggtctcagac agcaagaaag 2400 gctgcgttta tgtcattagg gggaacacca cggtcttcgg catgagagag gtgtaattct 2460 caagttcatc agagctcggc ttcccccatg aggggaaaca atttgccagg ttgaagaaca 2520 cacgetttga gggtteteag aggetgaeat etgttgtgaa tettggaaae teaageeeea 2580 gtgcaaacgg ccttgaagga ggtcgagcat catggttcca acaagtgact cgctttgata 2640 accegatgtg taagcagaat cgcaatgcat ccgtccttcc ctaatcatca cgtggctgtc 2700 atctggtcaa tgaactgagg cccgaaggct tgagtcaaac tggttttcaa ggctgtgctc 2760 atgggattta tatgtttctt gagccctgtt ggaggctctt ggcaggtctg aacattaaac

atttcttttc ttccttttgc

2780

<210> 37

<211> 3586

<212> DNA

<213> Homo sapiens

<400> 37

60 tgcccaaaag ttcagcccat tatacacatc cttttggctt ccgggtggta ggatttgagg 120 ttaggtcagg gataaagagt tattttgaac tctacaagcg tgtacttttt accctaaaaa 180 aaatctactg taggagctat tgttgcacac aaacacaagg gtagtggtta tatggtcagg 240 taatacagag ggttttagat ccagcttgaa tacatttgat ccaattataa ggtattttag 300 tagtcttcaa actttgtggt gaagtgggtg aatttacagg atgtatttta ttttctcatc 360 tgtaattatg ggaagaggaa attaaaaagt ccgaaggtaa aaataaaacc cagtgcaata 420 cgatgtggaa gaagagcaaa tgtcatgtat atcatttgct agaattccta gtttcaaatt 480 ggcctgttcc tcagaggtct tttttattca gtgttgttgt ttatgtagag catgttgtga 540 cagtgatcat ttacccactt atatgtggtg atacatgaca taactatgca tgcagatacc agtaaccaaa aatacctaat ccataaagtg acactcaaca catgggaaag tattgttgtg 600 660 ctttgttttc ccaatgtttc agttattatt aattattaac ataatggagt gttaacacta 720 gctagatggt gctagaaatg cacattgtta attcacaggc agacttgaga cacatcatat 780 agtgtgaatg taaattgttg aaaagaagtc agatattgac attgcagttt ggataagtaa 840 agagtaggat ttgccgtatg gactcctttc ctagcatcat ctgggctaac aataagggaa 900 tataatgtgg ccttcataga gctgtgatat ttaaaaaact atttaagggc tttggaaaca aaaacaacca gattcatttt ctggttttgc cacttactgt gactttgggc gaaaaaatat 960 1020 aaccactgtg agcctcaatt ttctgatctg ttaaatgggg ataatacaag tacctcacag 1080 gatatgtaga ggtttcaaat gtaaaataat gtataagaga gaaattatat aaaatagtgc 1140 ctgccatata atttgtgcta tacaaatcgt agttgctatc atcccttatt tacttgctcc ctatttggtt gcaaaacagg attataatga ttttttgaat tgcccagcta ttcagctatc 1200

1260 aatttctcag caattcgctg tcccacttcc aaacccagtg aactgagagg aaagttacct 1320 gatatagttt aacttettgg attaatggga atgetaacag aagacattaa atatatgaac 1380 aaaaatattt ggggaaaggc tttttcaaat aggccagtaa tcagattcct gcatagacta 1440 cttaccttgg gtgtattttt aattctgggt tattttcttt tacaatagat tttattttt 1500 catagtagat tttatttttc attgatgacc aaagtatgtt cctgcttctg cattgtcctc 1560 agctgacagt tgtgagatta aggaaatggc agggaattta caaatgaaat caccaacctg 1620 attctcctga actgtccctg ctatctaggc attacaggca atgctttacc ttgatttatg 1680 cctctgccct tgggatgggt gctattatcc cttctgtttt tccagtgagg aaactgaggc 1740 ataggacaag tatgtgccag aacccaaaag cctgattctg aaatccatat tctgtaactc 1800 ttcatagctt ggctgtattt attttgtcag tgtttatttt tgtttttcac attttgggag 1860 tataacagaa agccaaatga gtctcagtta tatttaatta agttgtcaga agttgatctt 1920 tgaatccttt tggaggttaa ctattttgaa ttaagtggta tttgagtatt ttgccacact 1980 acttggagaa aaatctacag ccaatattaa attaaaatac ctatgtataa tagttatttt 2040 tattccagaa ctattttta aaaaatcaac tgtattcttg aataaactag tttagttaaa 2100 catgaaatgt ggggtttttt ttgttcacca aataaaaatg cacttaggca gtcagtaagg aaagctttat tttactctgg cttctctctt tatcttcctt ttcctgtttt attttttca 2160 ttgactggaa aagatttatt tccctgcttg atgtgattaa acatgttttg ccaaattgat 2220 2280 gcatgagaac cagtttctat gagaagtctc ttctggagat gtatatccat gtaactctgt 2340 atttectece atatetgact gtttgtttee aatettttga etgetttett getttttaat 2400 gcctttatct ttgcttattt gaattaggta cttctctgct acctttcacc tgctcttttt 2460 ctgtgccatt gtttcccttg ctaccttacc taaaaccagg ccctagagaa acagaaagaa 2520 tacattgcct gccttaggaa tgagcgagat atgctcagag aggagctggc tgacctgcag 2580 gagacagtga agacgggaga ggtatgttag cattagcctg gaattcaggt ccctcactgt 2640 tttactctct atcttccttc ctttcatcct gccatctttc ctagcctaaa tacaaactac 2700 agtgtttatt ctctaatcca gatttggtag gttgaagcta tttcttacac agagctatat 2760 ttcatgtaac tgattctaac caggttttac ctgtagcaaa catgtattgt tgcagagtga 2820 cctcacagag cttacagctt ccatacgggc cttctgtgat ggtgggtttt tccccctgc 2880 agaaacatgg cttagttata atccccgatg gcactcccaa tggtgatgtc agtcatgaac 2940 cagtggctgg agccatcact gttgtgtctc aggaagctgc tcaggtcttg gagtcagcag

gagaagggcc	attagatgta	aggctacgaa	aacttgctgg	agagaaggaa	gaactactgt	3000
cacagattag	aaaactgaag	cttcagttag	aggaggaacg	acagaaatgc	tccaggaatg	3060
atggcacagt	gggtgacctg	gcaggactgc	agaatggctc	agacttgcag	ttcatcgaaa	3120
tgcagagaga	tgccaataga	caaattagcg	aatacaaatt	taagctttca	aaagcagaac	3180
aggatataac	taccttggag	caaagtatta	gccggcttga	gggacaggtt	ctgagatata	3240
aaactgctgc	tgagaatgct	gagaaagttg	aagatgaatt	gaaagcagaa	aaacggaagc	3300
tacaacgaga	gttacgaaca	gcactggaca	agattgagga	gatggagatg	accaacagcc	3360
acctggccaa	gcggctggag	aagatgaagg	ccaataggac	agcacttctg	gcccagcagt	3420
aggaaaacca	cccttcaacc	tgggtgatgc	tccttggggc	cctacctaga	gggactgact	3480
tttgtccatt	gacacaaacc	ccttttagta	ctgttttgag	ttttgtcatt	aaaacagcca	3540
cctttgtatt	ttataattta	tgacagaatg	aagtcatttt	gaatct		3586

<210> 38

<211> 4773

<212> DNA

<213> Homo sapiens

<400> 38

60 ttacgattgt attttgactt tttattaaat tcttgtttat tgttagcacc ctatagatta 120 ggctaatttt tataggtaag aaagataaca gcctttaaat gcagcttacc ttcttttcaa 180 ggaattetta gettttaaat tteattttgt tgtatggata aataateeta gtetgteatt 240 tcagaatgac aatatcagtt gtcattatgg ttatcaatat ggctaccaga tatttcatta 300 actccattct caagattgga aaattatatt tggcttagct gtcctggtgt ttttgaaaca 360 tgaacttgtc tatagactgt gtaatagttc agaaagtaaa ccatgtatct actgttgaaa 420 gtattatgta ttttaaaatc ttattttttg gataccagtc ttctggcatt cttaagaatg 480 gctttggatt tggaaaaaat aatcagcaaa tctttaaaag tgtagatacg gtgaaaacag 540 caaagaagaa tccctagaat acctgatata ctttatgtgg aaaattttaa taactgtata 600 agcgaagatg ttattaaaag gaatgaagta ttcaaatcaa actggtttaa acagtacaag

660 gaatgtattg gctctgggaa ttaaagaaaa gtccaagact aggaagggct tcatgcatgg 720 ttttgtcttg gttctccagc ttagtttctc tgtttccaat tcagctttgc ctttctcttt 780 cctcttggct tcatcagttc taggtctgcc acatttgcca caattctata ccacctagaa 840 gttttctatt ttttacttag agttttcctt cctcagtcac caaatgaaat tcctttatcg 900 attaagccaa atttagaatt tttcacctgg agtttttctt cttcagtcat caaatgaaag 960 tccttggctt taattgattg aaccagttta ggtcacatgt ccagtcactg tgatcaggaa 1020 aatgctgtgc actgattatt agtttaaatc tggattttct tctcatctct aagctaaaca 1080 ttaggcaagg aggttgggag tacactgagt gggctattta gaactgatac ttgaagctgg 1140 aaagtgggct tatttctacc caaattatat ggctgttgta ccatgggaaa agtgatgtag 1200 aatagatgtt ggataggtct gtcatgtctt tttattttaa aaggttaaga aagaaaatta 1260 gcaagacaga agagataagg aaaaagacgc aaaacaagat gggggaacta agtatatcca 1320 agattggaca gcagtgagga ttaaagcagc agtagtggag cagcaaattt gtgacaatac 1380 agaagaagct agtgagcaat gaagaaagaa aaaaaatgca gtatccatag tagacacttt 1440 ggtcctaaag ctcttgaagg ctctatcttc ggtatactgt atgggctatt gactcattta 1500 aaatgettte agtteeaaat aacaggaaac acaacteaga gggteteaaa cagttaagag 1560 gatttattag ctcatacaac taaaaaaata cacagaggta ggtcagcctt aaggtctttc ataaagaggt tgttggtgtc atcaagcttt ggctttattt ctttgcaatt ctctcttcta 1620 1680 tgtaccttac taataattaa gctcagattg tggtggttcc atgtactaat tggactagct tagatccttt tgttgatttt ggagacccga agttagagtc tgcttcccta gaaccatgta 1740 1800 gattccaaaa aaactaacca agcgttttga gaaagggaga aacagttgta agactgcaac 1860 tgtgaatgtt aaaataggca agcagtcctt tatttcttaa ttgtccataa agacattagt 1920 ttacataaat ttactcttca tttgcctagc tttcaatatt tactgagcac ctcctatttg 1980 ccaggcacta ttctaggcat taggattaca gtgtcatgga atggagctga cattctaata 2040 gaaggagacc tagaataaac aaagataatt gtacataatg ataaatgggt ttttttgttt 2100 tttgttttta tttttttac aaaaactgga taatgggata gagttgctgg gtggagattc 2160 agggaaggcc tctgaggaag tgaccactgg agccagaacc tcagtgatga gaaggaaata 2220 tgtgcaaaga tcaaggtgaa aagcattccg gatagaggaa acagcagagg cactgaggtg 2280 ggaacaatcc tggaatgagg gaagagtaga aagagaacta gaatgtctgg agagtagtga 2340 ataagtgaga gaagatacga gaaaaggaga aagagaggta ggggctaggc atggtaagta

2400 acacagattc cttttctttt agacaggcat atcaatgtat atgattctct gatgggcaag 2460 ttatgtttag tgtaaccttt ttaagaggtc agagaaatat gcaacatatt ttagggagat 2520 ttccatttta aaaattagtt aaaatatagg aagtttattt ctaagcttta gtgaacccat 2580 ttctcctggc cagttctttt tcacatcact tttcctatgt aataaaagat cggtagaaat 2640 tctgatatac atgactttga ctcatttatg attatagatg tccaaaatta catgcacaga 2700 attetettt gggaacttea ggtaagagae attttaegte eettaaaagt gtgteetatt 2760 ttcttgtagg caacattaaa tatcattcac agtgttgttc tctcagttct tgacaaaaac 2820 caaaggacta gagaattgga agagatttca caacagaaga atgctgcaaa agataattca 2880 ctggacacag aggtggctta tttaatccat gaaggcatgt ttataagtga tgcattcggt 2940 gagggtgagc taacacctat agcagttgac actacctctc aaagaaatgc atctccaaat 3000 agtgagccct gcagcagtga ttctgtatcc gagccagaat gtactactga ttcttcatcc 3060 agcaaagagc acacatcatc atctgctatt ccaggaggtg tggatattat ggtcagtgaa 3120 gatatgaaat taactgactc agagctagga aagctggcaa ataatatcca ggaattatta 3180 tatagtgcct cagatatatg ccatgatcga gctgtcaaat ttctcatgtc aagagcaaag 3240 gatggttttc ttgagaagct aaattccatg gaattcataa cactttctag attaatggaa 3300 acattcattt tagacaccga acagatctgt ggaagaaaaa gcacgtcatt acttggagca 3360 cttcagagcc aagctattaa gtttgtaaat aggtttcatg aagagagaaa aaccaagctc 3420 agcctcctct tagacaatga gcgctggaag caagcagatg ttcctgcaga atttcaggat cttgttgatt ctctgtcaga tgggaagatt gctttacctg aaaaaaaatc aggagccaca 3480 3540 gaagaaagga aaccagctga agttcttatt gtcgagggac aacagtatgc agttgttgga 3600 accgtattgc tgttaataag aattatcctt gaatattgcc agtgtgtgga taacatccca 3660 tetgttacta etgacatget tactegtetg teagatttat tgaagtactt caatteaaga 3720 agttgccagt tagttcttgg agctggtgca ctgcaagttg ttggactaaa aacgataact 3780 acaaaaaatt tggctctttc ttcacgatgt ttgcagttaa ttgtgcacta cattcctgtg atccgggctc attttgaagc tcgactacca cctaagcaat atagcatgct taggcatttt 3840 3900 gatcatatca ctaaggacta ccatgatcac atagctgaaa tatcagctaa gcttgtagcg 3960 ataatggata gcttatttga caagctgtta tctaagtatg aagtgaaggc tcctgttcct 4020 tctgcctgtt tcaggaatat ttgtaagcaa atgacaaaaa tgcacgaagc tatatttgat 4080 ctccttccag aagaacaaac acagatgtta tttttaagaa ttaatgcaag ttataaactc

cacttgaaaa agcagttatc tcacttaaat gtgataaatg atggaggacc tcaaaatggg 4200 ttggtcacag cagatgtagc tttttacact ggaaatcttc aagccttaaa aggccttaaa 4260 gatttggacc taaatatggc cgaaatttgg gagcagaaga ggtgatgtca tcctggaaaa 4320 ctgggtagtt catctgacca tgggatgtgt ttgttatgaa gaaaatctgg atgcctgtga 4440 atcaagtgtt gggaaactgg attcagtggg atctacaagg aatgtcattt ttgtgcatcc 4500 tacagtgagg agtaactgat caggtgtcta taacattttt cattctctct ggaaacagac 4560 tcaggtttct ttggaccaaa tccaaaagaa cacatagctg taacacagct gtagttgact 4620 agaatgetet gtataettta tattaaaaaa tgetttgeat ttetteeagt geaatgaaat 4680 tcatatggtg tcccacctta tttaatgatg gtacaattta aaatcttagt caacttctgt 4740 agaaagtttt ctctatgaaa gtaaagctgt ttgaaaaatt attattttt tacagatctt 4773 tctataaaaa ataaacatct tttgattgct tgg

<210> 39

<211> 2703

<212> DNA

<213> Homo sapiens

<400> 39

60 cacagcagcc cccgcgcccg ccgtgccgcc gccgggacgt ggggcccttg ggccgtcggg 120 ccgcctgggg agcgccagcc cggatccggc tgcccagatg cgggcgccac tctgcctgct cctgctcgtc gcccacgccg tggacatgct cgccctgaac cgaaggaaga agcaagtggg 180 240 cactggcctg gggggcaact gcacaggctg tatcatctgc tcagaggaga acggctgttc 300 cacctgccag cagaggctct tcctgttcat ccgccgggaa ggcatccgcc agtacggcaa 360 gtgcctgcac gactgtcccc ctgggtactt cggcatccgc ggccaggagg tcaacaggtg 420 caaaaaatgt ggggccactt gtgagagctg cttcagccag gacttctgca tccggtgcaa 480 gaggcagttt tacttgtaca aggggaagtg tctgcccacc tgcccgccgg gcactttggc 540 ccaccagaac acacgggagt gccaggggga gtgtgaactg ggtccctggg gcggctggag

600 cccctgcaca cacaatggaa agacctgcgg ctcggcttgg ggcctggaga gccgggtacg 660 agaggctggc cgggctgggc atgaggaggc agccacctgc caggtgcttt ctgagtcaag 720 gaaatgtccc atccagaggc cctgcccagg agaggaggc cccggccaga agaagggcag 780 gaaggaccgg cgcccacgca aggacaggaa gctggaccgc aggctggacg tgaggccgcg 840 ccagcccggc ctgcagccct gaccgccggc tctcccgact ctctggtcct agtcctcggc 900 960 ctccatttgt cctctctttc tttccaccct tctatcattt ttctgtcagt ctaccttccc 1020 tttcttttc ttttttattt cctttatttc ttccacctcc attctcctct cctttctccc 1080 teceteette cetteettee tettetttet eaettatett ttatetttee ttttettet 1140 teetgtgttt etteetgtee tteacegeat cettetete eteecteete ttgteteeet 1200 ctcacacaca ctttaagagg gaccatgagc ctgtgccctc ccctgcagct ttctctatct 1260 acaacttaaa gaaagcaaac atcttttccc aggcctttcc ctgaccccat ctttgcagag 1320 aaagggttcc agagggcaaa gctgggacac agcacaggtg aatcctgaag gccctgcttc 1380 tgctctgggg gaggctccag gaccctgagc tgtgagcacc tggttctctg gacagtcccc 1440 agaggecatt tecacagect teagecacea gecaceega ggagetgget ggacaagget 1500 ccaaggette cagaggeetg gettggacae etceeccage tggeegtgga gggteacaac 1560 ctggcctctg ggtgggcagc cagccctgga gggcatcctc tgcaagctgc ctgccaccct 1620 categgeact ecceacagg ecteette atgggtteea tgeecetttt teccaageeg gatcaggtga gctgtcactg ctgggggatc cacctgccca gcccagaaga ggccactgaa 1680 1740 acggaaaggg aagctgagat tatccagcag ctctgttccc cacctcagcg cttcctgccc 1800 atgtggggaa acaggtctga gaaggaaggg gcttgcccag ggtcacacag gaagccttca 1860 ggctctgctt ctgcctgatg gctctgctca gcacattcac ggtggagagg agaatttggg 1920 ggtcacttga ggggggaaat gtagggaatt gtgggtggg agcaagggaa gatccgtgca 1980 ctegtecaca eccaceacca cactegetga cacceacce cacaegetga cacceacce cacacttgcc cacacccatc accgcactcg cccacaccca ccaccacact gccccacacc 2040 2100 caccaccaca etcececaca eccaccacca cactegecca cacceaccac cagtgacttg 2160 agcatctgtg cttcgctgtg acgcccctcg ccctaggcag gaacgacgct gggaggagtc 2220 tccaggtcag acccagcttg gaagcaagtc tgtcctcact gcctatcctt ctgccatcat 2280 aacacccct tcctgctctg ctccccggaa tcctcagaaa cgggatttgt atttgccgtg

2340 actggttggc ctgaacacgt agggctccgt gactgggaca ggaatgggca ggagaagcaa 2400 gagtcggagc tccaaggggc ccaggggtgg cctggggaag gaagatggtc agcaggctgg 2460 gggagaggct ctaggtgatg aaatattaca ttcccgaccc caagagagca cccaccctca 2520 gacctgccct ccacctggca gctggggagc cctggcctga accccccct cccagcaggc 2580 ccaccetete tetgaettee etgeteteae etcecegaga acagetagag ecceeteete 2640 cgcctggcca ggccaccagc ttctcttctg caaacgtttg tgcctctgaa atgctccgtt 2700 gttattgttt caagacccta acttttttt aaaactttct taataaaggg aaaagaaact 2703 tgt

<210> 40

<211> 2039

<212> DNA

<213> Homo sapiens

<400> 40

taaaaaaaaa aaagtaccaa agccgaggcg catcctcgca cctgcctgcc ttgggccagc 60 120 gggcggggcc cgggaacgtg catttcaaag gggccgcggt tcctgcgatg cgctggactc 180 tgggaagcgc gaacagagcg ttttgcgggc tctgcgggga gagctggcgc cggcgtctcc 240 ctgtagcagg actgggcgcc gcgcccgtgg gtgggctgct gcccggcccc gccgcccagc 300 caageegeeg cetgggtgge catteeegag eeggacteeg gggaagtgge agegtggate 360 ccagccgcca gaattcgagg tctgcggcgg ctttcaaaac ttgacaactt tcctttccag 420 gaggaccccg ttctggagcg ttatttcaaa ggccacaaag ctgcgatcac ctccttggac 480 ctcagcccca acggcaagca acttgctact gcttcttggg atacctttct catgctatgg 540 aatttcaagc cacatgctag agcttacaga tatgtgggtc acaaggatgt tgtaaccagc 600 gtgcagtttt ctccacatgg aaacttattg gcgtctgcct cacgagacag aaccgtgaga 660 ctctggattc ctgataagag aggaaaattc tcagaattta aagctcatac agctccagtt 720 cgaagtgtag acttttcagc tgatggccag tttctagcta cagcttctga agacaaatcc 780 ataaaagtat ggagcatgta tcgccagcgc ttcctgtatt ccttgtatcg acatacacac

840 tgggtacgct gtgccaaatt ttcacccgat ggaagactaa ttgtgtcatg tagtgaggat 900 aaaactatta aaatttggga taccacaaat aagcaatgtg ttaataactt ctcagattcc 960 gttggatttg caaattttgt ggactttaac cctagtggta catgcatagc ttcagcaggt 1020 tctgatcaaa ctgtgaaagt ctgggatgta agagtgaaca aattactaca gcattaccaa 1080 gttcacagcg gtggagttaa ttgcatatca ttccatcctt cgggtaacta tctcatcaca 1140 gcttcttcag atggtaccct taagattctg gacctcttag aaggaaggct catctataca 1200 cttcaaggac atacgggacc tgcctttact gtttcatttt caaaaggtgg agagctattt 1260 gcatcaggag gtgcagacac acaggtctta ttatggagga ctaactttga tgaattgcat 1320 tgtaaaggtc ttaccaaaag aaatctcaaa agattacatt ttgattcacc accacatctt 1380 cttgatatct acccaagaac accacatccc catgaggaaa aagttgagac tgtagaaatt aatccaaagc ttgaggtaat cgatttgcag atctctactc cccctgttat ggatatcctt 1440 · 1500 tcttttgatt ctaccacaac aacagaaacc agtggtagga ctctgccaga caagggtgaa gaggectgtg gatatttett gaaccettee ttaatgteae cagaatgttt gecaacaace 1560 1620 acgaaaaaga aaacagaaga catgagtgac ctcccctgtg aaagtcaaag gagcatacct 1680 ctcgctgtga ctgatgcttt agagcatatt atggaacaac tcaatgtttt gacacagact 1740 gtttcaatct tggagcagcg actgactttg acagaggata agctgaaaga ctgccttgaa aatcagcaaa agcttttcag tgctgtccaa cagaaaagct gaataaaaaa ttcattttca 1800 1860 tttgttgggc agaggcccaa taaatgaaca aatgtacata cactcaggaa ggtagtacaa gatactccat acaacacaac catgtgctat ttatcatggc atttcttaaa agggtgagca 1920 1980 acagaacaaa aggcagaaaa ggcataccta aggactaatt taaacacata tcaatgtgaa 2039 ggactaattt aaattactat catttatgat tgcagtaata aagtgataag cattcaagc

<210> 41

<211> 2452

<212> DNA

<213> Homo sapiens

60 gtgcgcagta gcgggcctgg ccagcggctc ggggcttgca gggagggcgg atctcgggtc 120 ggacccgcag ccccagacgc cgggcttggg ggttcccccc gccccggcct cctgccagtc 180 actaccaccc ctagcctctc caactgagct cggcgccggg agaggattaa cacccaggaa 240 ggcagggggc tccctttatc caaggaggtg gctgtgcagg tggccaccac aggtggcagg 300 aaccacaggc tggggcactc cggagtcagg agtgagtggg caggttgact ggcatcaggc 360 agcctctcag ccagggccct ctccgcatca gcatgaactc caggaccgca tctgctaggg 420 gctggttcag cagccgccca cccacctctg agtctgacct ggaacctgcc acagatgggc 480 cagcetecga gaccaetace etcageceag aggecaecae etttaatgae accagaatee 540 ctgatgcagc tggtggcacg gccggcgtgg gtaccatgct tctgtccttt gggatcatca 600 cggtgatagg cctggctgtg gccttggttt tgtacatcag gaagaagaag aggctggaga 660 agctacgcca ccagctcatg cccatgtaca acttcgaccc cacggaggaa caagatgagt 720 tggagcagga gctgctggag catgggcggg acgccgcctc tgtacaggct gctacttctg 780 tgcaggccat gcagggcaag actactctgc cctcccaggg cccactgcag agacccagcc 840 ggctggtgtt taccgatgtg gccaatgcca tccatgtgtg agtggcctgg gacaagcctg 900 gacttctgat agagacccat cacggtgcct acagagctcc ccactccctg attgtcaaga 960 cctactctga agatcttccc tgccaagaca caagagggct gagccaggtc ctagctgttc 1020 tecagaceca cetgetgaet ttagacteta agagagggee etagecagge tggacttetg 1080 accactgact tctcctgacc tgagggccct ggcacagagg gcatccctca tgctgagaag 1140 gtcaagagcc tctgctggct tcctcatccc ctgtccagat ccctcacatc agggtctgcc 1200 ccgctaatgt ggaggaaatg agggagatac ggagtgggag ggattggggg aggaaagggg 1260 aggtttccct ctgttaggga gagacctgtt ttttggaatc tggagcctcc tctggggtgg 1320 ggagaggaaa ccacccaagt tatagggaca gggtagggca gcatctgtta tgggccctga 1380 gaagcccaga gatggagctg aaactgtcca gtatgcaagg atgccaggag aagggcaatt 1440 cacacccagg gtccatccat actacggagg gtccaggagg tctcccagcc acccatcctt 1500 ggcaaccaga tgttactggg gccaagctag gatgggagct gagggggaag gaagtagggg 1560 aatggaagtg gaaggatgca gccccccag acctgccgag aggcctcatg catgtgcatg 1620 agtgtgccca tgggcagaca tgtgcctgtc ccagcacagc gggcagaatg agattgtcca 1680 cactggcccc accetecaag tegaceteta ecceatggta tgtagtggag cateagggta ggctatette tetgeettea atetteaggg aetgeaggga agagggaage aegeaeagea 1740

1800 eggtteetet etecaetgea etgttteaet gggeteaeet gettetgaaa aeggeteeet 1860 gtcttgggct ctaatgagga tctggggttg ggagaggctg ttggtctgag ggcagtaatc 1920 acaggetgca ggctagaggg ggcagttatg actgcctgaa agtgggtgag ggattgcact 1980 tcagaaaaac atctaaaaaa cttagtctat gtttgaattc cccacctcca tcccatctat 2040 gggaagagcc gttcagtgtt tagagagtgg ggagatgggt ccctgcactt ggcctctcca 2100 taagccttgg agggtcaggg ctgataccag gggtcctggc aagccattgg gcagagacag 2160 accacaagag cagggcattt ttttacgctg ggcatacata tgcacacaag catgcacaga 2220 ggcatgtccc gtgcccagcc tctccaccgt cactgtccgc tgctggctgg aggggatgca 2280 ggggtagtgt atgcagacct tccactgggc aaatgccatg tgtcaggagg gaaaggccta 2340 ggaagccccc atggggaagg ttctggattt attccctcct ctaaatgcta taaatacgtt 2400 agcacttgag tcgactggag gctgccagga attcaggatg catacagctg taatttaacc 2452 cagagcagct ccacgtgaga gcattaaaga tgtaatgaag atgtttacat gg

<210> 42

<211> 3421

<212> DNA

<213> Homo sapiens

<400> 42

60 gtggccccga tggagcggta caaagccctg gaacagctgc tgacagagtt ggatgacttc 120 180 gcggagctcc tccggcttta caccaaaagc agcagctctg atgaggagta catttatatg 240 aacaaagtga ccatcaacaa gcaacagaat gcagagtctc aaggcaaagc gcctgaggag 300 cagggeetge tacceaatgg ggageecage cageacteet eggeeectea gaagageett 360 ccagacetee egecacecaa gatgatteea gaacggaaac agettgeeat eccaaagaeg 420 gagtetecag agggetaeta tgaagagget gagecatatg acacatecet caatggteae 480 tctggcggat ttctccccac tggagtcccc agatgggtgc aggtgcccga aagagtcatt tatgccacga tcaccttgga ggacggagag gctgtgagca gctcctacga gtcctacgat 540

600 gaagaggacg gcagcaaggg caagtcggcc ccttaccagt ggccctcgcc ggaggccggc 660 atcgagctga tgcgtgacgc ccgcatctgc gccttcctgt ggcgcaagaa gtggctggga 720 cagtgggcca agcagctctg tgtcatcaag gacaacaggc ttctgtgcta caaatcctcc 780 aaggaccaca gccctcagct ggacgtgaac ctactgggca gcagcgtcat tcacaaggag 840 aagcaagtgc ggaagaagga gcacaagctg aagatcacac cgatgaatgc cgatgtgatt 900 gtgctgggcc tgcagagcaa ggaccaggct gagcagtggc tcagggtcat ccaggaagtg 960 ageggeetge etteegaagg ageatetgaa ggaaaceagt acaeeeegga tgeeeagege 1020 tttaactgcc agaaaccaga tatagctgag aagtacctgt cggcttcaga gtatgggagc 1080 tccgtggatg gccaccctga ggtcccagaa accaaagacg tcaagaagaa atgttctgct 1140 ggcctcaaac tgagcaacct aatgaatctg ggcaggaaga aatccacctc actggagcct 1200 gtggagaggt ccctcgagac atccagttac ctgaacgtgc tggtgaacag ccagtggaag 1260 tctcgctggt gctctgtcag ggacaatcac ctgcacttct accaggaccg gaaccggagc 1320 aaggtggccc agcaacccct cagcctggtg ggctgcgagg tggtcccaga ccccagcccc 1380 gaccacctct actccttccg catcctccac aagggcgagg agctggccaa gcttgaggcc 1440 aagtetteeg aggaaatggg ceaetggetg ggteteetge tetetgagte aggeteeaag 1500 acagacccag aagagttcac ctacgactat gtggatgccg atagggtctc ctgtattgtg agtgcggcca aaaactctct cttactgatg cagagaaagt tctcagagcc caacacttac 1560 1620 atcgatggcc tgcctagcca ggaccgccag gaggagctgt atgacgacgt ggacctgtca gagctcacag ctgcggtgga gcctaccgag gaagccaccc ctgttgcaga tgacccaaat 1680 1740 gagagagaat ctgaccgagt gtacctggac ctcacacctg tcaagtcctt tctgcatggc 1800 cccagcagtg cacaggccca ggcctcctcc ccgacgttgt cctgcctgga caatgcaact 1860 gaggecetee eggeagacte aggeecaggt eccaeeceag atgagecetg cataaagtgt 1920 ccagagaacc tgggagaaca gcagctggag agtttggagc cagaggatcc ttccctgaga 1980 atcaccaccg tcaaaatcca gacggaacag cagagaatct ccttcccacc gagctgcccg 2040 gatgccgtgg tggccacccc acctggtgcc agcccacctg tgaaggacag gttgcgcgtg 2100 accagtgcag agatcaagct tggcaagaat cggacagaag ctgaggtgaa gcggtacaca 2160 gaggagaagg agaggcttga aaagaagaag gaagaaatcc gggggcacct ggctcagctc 2220 cggaaagaga aacgggagct aaaggaaacc ctactgaaat gcacagacaa ggaagtcctg 2280 gcgagcctgg agcagaagct gaaggaaatt gacgaggagt gccggggcga ggagagcagg

cgcgtggacc	tggagctcag	catcatggag	gtgaaggaca	acctgaagaa	ggctgaggca	2340
gggcctgtga	cgttaggcac	caccgtggac	accacccacc	tggagaatcc	caaagctgtc	2400
acacctgcct	ctgccccaga	ctgtacccca	gtcaactctg	caaccacact	caagaacagg	2460
cctctctcgg	tcgtggtcac	aggcaaaggc	actgtactcc	agaaagccaa	ggaatgggag	2520
aagaaaggag	caagttagaa	aacaagcttc	atctaaagac	tctcatgtca	atgtggacct	2580
tggtgacaat	cctgctttgt	taaagcaaaa	actatgcgaa	agggtgagtc	tgtttagaag	2640
aaaaagcaaa	gactgaggta	ctgtgaatgg	agagcttcag	ctaagaggag	gctctgtccc	2700
ttttcagagc	caaaggaaat	aatacaacaa	aaaggaggct	tctttggaga	cctaagtcta	2760
ttggatgtaa	acaagacgtt	gtatttaggg	atgttctgtg	tttctttctt	ttttgaagtt	2820
gtcatcaatt	gctttactaa	gatttttaaa	tagtgaaaac	ctcctgttta	gactttggtg	2880
gaagatgaat	caaggaagca	gggccctgtc	ttatgggtca	cgtgtctttg	gtgagtgaga	2940
agacctaaac	tcctggccat	catctcttat	ccaatactta	gcagttgggg	attaaaccat	3000
ccttgccttc	agttctctcc	aatattacca	ggcccaactc	agtcttcagt	gattttaaac	3060
agcattgaca	tcatctgtaa	aaccatcatc	tgtaaaacca	tctatgacat	gagttttgag	3120
aaacaataat	ggggaaaata	tttgggacca	agctgaagca	ctaatcccac	taagttaaag	3180
acttctttcc	agtccaaggc	aggcctgaat	caactgtctt	taaataaaat	tttaagtgat	3240
gctgtattat	atataggaaa	aaatgcttaa	aatcctgtca	tttagaacag	tgaaaagtat	3300
cttttgagat	taaagtgact	ctttactgta	ggaaaaatat	tactctgtgt	ttacagattc	3360
attgctgtgg	tcaggccatt	tttaagggaa	gagttattta	atataaatag	tctctgattt	3420
t						3421

<210> 43

<211> 4834

<212> DNA

<213> Homo sapiens

<400> 43

ctccagaaca aaactcgtac attgctggtc ccaaaaggga ggtggccaag tggggcaggg

120 ctgtggtgga agccctgagt cccctttctg accttgcaag gccttgattt tcctttctgt 180 catttccccc tgacggtgtc acttctctgc ctttccttcc cgccgtgcaa gtgtgtcggc 240 cccgtggccc cagagtcgtg tgtcccctag acttcctagg acgtatctat tgtacacacc 300 tataaatacc tgtgttttat gttgatagag atatatactg taaatagcat atatacttga 360 gcaatatata tgttaatata tactgtgtgc gcagtccgtg gacacagccc cccgctgtgt 420 gtgcacacgt gtatgggcgt gacggcctcc accccgcacc gtctgccata cacgcgggca 480 catttgagcc accatatatt tttaattcaa gtatataggc aatacgatta ttacagaagc 540 cgatgggttc cctcagacct gacttgagag aacaaagcca gcagctcaaa gagcctgtga 600 catgggacgt gggaagggtg ctgagagccc gctgtggcgt gggtcatgcc ttctgcaccc 660 cactttcccc aggcaagatc cctgggcgcc cttatttggg gggatgttga tcccgaggga 720 ggagtatttg gaatttettg ettttaacca gaatgeeece teteecetge eetegeeage 780 agecteacce tgaagacetg ggeetgetga atgggeeaca egetgeetgt gteetgeete 840 cgtgggtggc actttttacg caggcagctt ctctgttttt tttgtttttt gtaacctgca 900 agettagaaa teteaggttg tgeteetggg getgeteetg gggaetggee tegtgteatg 960 gagaaaagca tgtgtgtcgg ggcgcgctgg ggccagggta tggctctccg ccctggctgg 1020 ctctgcaggg gtggtccctg ttcaagcccg ctccgtggga gctgccccct ggggaccctg 1080 ctcctcggtc acagggggcc cctttagttt tcccatcccc atcctgctcg tgtaaagctt ggtttatctt ctcggcgttc tgtgtgtagc gtagtcttgg tttggtctcc acagctcttc 1140 ggggtgggt gtgagtgtgg tttttcccag gcaggggccg tctgcccttg tcccccagct 1200 1260 atctcctggt ctgctgggtg ggagggtctc tccaggcccc agaccccact tggaggggca 1320 tgtgtttctc agaggggctc catccgcagt tgcatggaac tccttacctg tttgccgtcc 1380 atccccgga ggtaatcaga ggagtgggcc tgttgtcttg gcgctggcgg atggggcagg 1440 tgcctggcgg gggaggaaga gggctctcta tgatgtggaa ttttttttt ttttttttg 1500 agacggagtc ttgctctgtc gcccaggctg gagtgctgtg gcatgatctc agctcactgc 1560 agcaacetee actteetggg tteaagegag teteetacat tggeeteeca agtaggtgag 1620 attacaggca ctcaccacca cacgcggcta atttttgtat ttttggtaga gacggggttt 1680 caccatgttg gccacgctgg tcttgaactc ctgacctcaa gtgatccacc caccttggcc 1740 tcccgaagtg ctgggattac aggcatgagc caccgtgccc ggcctcatgg aatttctagg 1800 ggtgagcagg tgaccetggg gctgccactt gagetectgg agtgtgtgtc ttggcccctg

1860 tgtggttctc cattaagaaa agctcagata gtctcaaccc caccctctcc ccttgctgca 1920 ctcagagtac cagtgggagc tgaaggatgg ggaggaacag agcagtgacc accectccct 1980 gccactgata agttctgcct cgtcgtgggg ctcccctggt tcccaagaca ccccttcctc 2040 cctcagcccg tcgtcctaac ccagcaaaga tctgggcatt gctgactctg cacctccttc 2100 ctccatgggc atctccagga ccgccctcct tcaaggggca ctgcccacac caccgtcctc 2160 agcccgagge atgcatctga gctggagagg cttgcaggcc tgaccctggt agcttcccct 2220 ccccaagatt cagaggggg gacccaaagc ctcactccaa accactggca ttctcacctc 2280 ctctcacctc caggcaccag gctgctggtg ggaaaggaag gagctggggg atcagaggct 2340 tccagtgtgg cctccggaag cagcagcgta gccagggtga catttgttca gcaggaggag 2400 gcttggtctg gaggggcttg cccctctgag gtgacagagg atgccctgga ggtcaggaga 2460 gaagactggg aagacaggaa gggccaggcc cctgttaaag cccagggcac tatttggtga 2520 tetteaaagg tgaacacagg ceacetecea etggeeecet ceteetggee acatttteea 2580 gggataccct ggggagtcct aaggccaccc tgggcccctt tctgagccta gagatctgga 2640 tgtggtgaca accagggctt ttcccagccc cagctaagag agggggcttt agggcaagag 2700 2760 tgcagtggtg cgatctcggt tcgctgcaac ctctgcttcc caggttcaag tgattctcct 2820 gcctcagcct cccaagtagc tgggattaca ggcacccacc accacgctcg gctaattttt gtatttttag tagagacagg gtttcactat gttggccagg ctgttcttga actcctgacc 2880 tcaggtgatc cgcccacctt ggcctcccaa agtgctggga ttacaggcat gagatacccc 2940 3000 gcctggccaa tgggattttt gacgccactt cctgagtgaa gcgctttgca tggggatggg 3060 aagaagcacc cccaaccttc tagtccgctc cgagcagggc ctggagcatt ggagacattg 3120 gttagtgtaa taggcagagc ctgagtgagg ccggggggct tctccaacag agaaaagaca ttggctttgg gtaccatgct gagggagggg gttaggcctg gtgggggccc attcaaagga 3180 3240 ggccgggctc ggtggcttag gcctgtcatc ccagcacttt gggagaccaa ggtgggagga 3300 tagcttgagg ccaagatagc aagaccaccc tggtcaacat agcaagaccc tgcctctaca 3360 agaaaataac gaaagaggcc ccagggaagg aagccagcca ggagcagcct ggagcagagg 3420 caggagectg aggectgage catggeatee agggacagee tggtggeega gagagettgt 3480 ggctgtcact ataagggaag aggagctatg gaaattggaa gtgcagggtg gcctgtgtgc 3540 taggagtggg ggtgcaggcc taggtgtgtt tatgcacacg tttgtgcatg tacgtgtgag

3600 cgtggatgtg ttcctatgca ttagagtgtg tgcgtgcacg tgtgcagagc ccacacctga 3660 gatatgggac tggctcttgg agtattttga gttctcagta gcagtcttgt tgtcaggcct 3720 tgagtgcaga aatgattagg tgagtgaggg caggactcga atgcagaccc tggctccagg 3780 ggaggggtg gggcgtctct ggtaggacgg cctcacccca cttgtcagaa ctactctgga 3840 ggggggcaaa ggtgtcagga acagtttgag cagttctggc tcagggtcac tcatgaggtt 3900 gctgttgtct gaaatcttag ctaaggattg gaggatgcac ttctaagtga ggcctggctg 3960 taggcaggag gcctcagtcc ttccccaggt gggccaaccc acagggctgc ttgagtgtct 4020 tcacaatatg gcgctcggct tccccccaga gcaagagatt caagggccca gggtaaaagc 4080 caacgtgtta tttttatccc tagcctcaga attcacacgc cgttgcctcc accatgctct 4140 ggtttgatac agcccagctc tgattggaag gggctggggc tgcccgtgct gactcttcaa 4200 aggcatecea teetgeagat ggtgtteaea gggagagttt gtgggggeeg geaeteeete 4260 atctactggg gctcattctg gaagaaggtc cagaagaatt ggagacccct gccctcacc 4320 caaactttgg aggtggcagg gtgaacagca ggccaagttc aggtcccaag acaggccaag 4380 gccagtgcgg tttcccttcc actgcctcag tttacctgta ttcagaagac agtctaggaa gagttgagca gagttccctc taaaagagta gggagctgat aacagtccca agccctcctc 4440 4500 tttctctatg ccaaaatcat ttccgttatc ctgagatggg ggtgagtgga tggatggtgt actgaggggc ctctgccctg cccagagccc ccaccatcgt agtgggggca ggggacttcc 4560 tgcccacaac ccctccaac cctcacctgg cgtgcccggg tcaccagcag cagcagcggc 4620 gctccatcgc tcccaagatc tgggtgaagg ggagaacctg ccatcttatc cctaccccc 4680 4740 cggggccctc aagcttattt tcttgttgaa gaaacacaaa accctcgaga ttcatgtact 4800 gtatgttgga gaaaaaaat tacctaatgt tcccccaaaa aagacagtat attttgtact 4834 ttgtaaagtg ttaattaaaa tgaaaaaaaa aaac

<210> 44

<211> 3619

<212> DNA

<213> Homo sapiens

<400> 44

60 agagetgete ggetgatgat gatgggeact aggacacgea gagetgeeeg getgaegatg 120 atgggcacta ggacactcag agctgctcgg ctgatgatga tgggcactag gacacgcaga 180 gctgcccggc tgacgatgat gggcactagg acactcagag ctgctcggct gatgatgatg 240 ggcactagga cacacagaac tgcttggctg atgatcatgg gcactaggac actcagaact 300 gcccggctga tgatgagggg cactaggaca ctcagagctg ctcggctgat gataatgggc 360 actaggacac gcagagctgc ccggctgacg atgatgggca ctaggacaca cagaactgcc 420 cggctgacga tgatgggcac taggacacac agaactgccc ggctgacgat gatgggcact 480 aggacacaca gagctgctcg gctgacgatg atgggcacta ggacactcag agctgcttgg 540 ctgatggtga tgggcactag gacacgcaga gctgctcggc tgatgataat gggcactagg 600 acacteagag etgetegget gatgateatg ggeactagga cacacagaac tgeceggetg 660 atgatgaggg gcactaggac actcagaagt gcccggctga tgatgagggg cactaggaca 720 ctcagagctg cccgggtgat gataatgggc actaggacac gcagagctgc tcggctgatg 780 ataatgggca ctaggacact cagagctgct cagctgatga tgatgggcac taggacacac 840 agagetgete ggetgatgat gatgggeact aggacacaca gaactgeteg getgatgatg 900 atgggcacta ggacactcag agctgcccgg ctgatgatga tgggcactag gacactcaga 960 gctgctcggc tgatgataat gggcactagg acacacagaa ctgcccggct gatgatgagg 1020 ggcactagga cactcagaac tgcccggctg atgatgagag gcactaggac actcagagct 1080 gctcggctga cgataatggg cactaggaca cacagagctg ctcggctgac gataatgggc 1140 actaggacac acagaactgc ccggctgacg atgatgggca ctaggacact cagagctgct 1200 cggctgacga tgatgggcac taggacactc agagctgctc ggctgatgat catgggcact 1260 aggacacaca gagctgctcg gctgatgatg atgggcacta ggacactcag agctgcccgg 1320 ctgatgatga tgggcactag gacactcaga gctgcccggc tgatgatgat gggcactagg 1380 acactcagag ctgctcggct gatgatgatg ggcactagga cactcagagc tgctcggctg 1440 atgatgatgg gcactaggac acacagagct gctcggctga tgaggggcac taggacacac agaactgccc ggctgatgat gaggggcact aggacactca gagctgctcg gctgacgatg 1500 1560 atgggcacta ggacacacag agctgctcgg ctgacgatga tgggcactag gacacacaga 1620 gctgctcggc tgacgatgat gggcactagg acactcagag ctgctcggct gacgatgatg 1680 ggcactagga cacacagaac tgcccggctg acgatgatgg gcactaggac actcagagct

1740 gctcggctga tgatgatggg cactaggaca ctcagagctg ctcggctgat gatgatgggc 1800 actaggacac acagagctgc ttggctgatg atgatgggca ctaggacact cagagctgcc 1860 cggctgacga tgatgggcac taggacactc agagctgctc ggctgatgat gatgggcagt 1920 aggacactca gagctgctca gctgatgatg atgggcacta ggacacacag aactgcttgg 1980 ctgatgatca tgggcactag gacactcaga actgcccggc tgatgatgag gggcactagg 2040 acactcagag ctgcccggct gatgataatg ggcactagga cacgcagagc tgctcggctg 2100 atgataatgg gcactaggac actcagagct gctcggctga cgataatggg cactaggaca cacagagetg eteggetgat gatgatggge actaggacae teagagetge teggetgaeg 2160 2220 ataatgggca ctcggacaca cagaactgcc cggctgacga tgatgggcac taggacactc 2280 agagetgete ggetgatgat gatgggeact aggacactea gagetgeteg getgatgatg 2340 atgggcacta ggacacacag agctgctcgg ctgatgatga tgggcactag gacactcaga 2400 gctgcccggc tgatgatgat gggcactagg acactcagag ctgctcggct gatgatgatg 2460 ggcactagga cactcagagc tgctcggctg atgatgatgg gcactaggac acacagaact 2520 gctcggctga tgatgagggg cactaggaca ctcagaactg cccggctgat gatgaggggc 2580 actaggacac gcagagctgc tcggctgacg ataatgggca ctaggacacg cagaactgcc 2640 cggctgacga tgatgggcac taggacacac agaactgccc ggctgacgat gatgggcact 2700 aggacactca gagctgctcg gctgacgatg atgggcacta ggacacacag aactgcccgg 2760 ctgacgatga tgggcactag gacactcaga gctgctcggc tgatgatgat gggcactagg 2820 acactcagag ctgctcggct gatgatgatg ggcactagga cacacagagc tgctcggctg 2880 atgatgatgg gcactaggac actcagagct gctcggctga tgatgatggg cactaggaca 2940 cgcagagctg ctcggctgat gatgatgggc agtaggacac tcagagctgc ccggctgatg 3000 atgatgggca ctaggacaca cagaactgct cggctgacga tgatgggcac taggacacac 3060 agaactgccc ggctgacgat gatgggcact aggacactca gagctgctcg gctgacgatg 3120 atgggcacta ggacacacag agctgctcgg ctgacgatga tgggcactag gacacacaga 3180 gctgctcggc tgacgatgat gggcactagg acactcagag ctgctcggct gacgatgatg 3240 ggcactagga cacacagaac tgcccggctg acgatgatgg gcactaggac actcagagct 3300. gctcggctga tgatgatggg cactaggaca gacagaactg ccaggctgac gatgatgggc 3360 actaggacac tcagagctgc tcggctgatg atgatgggca ctaggacact cagaactgct 3420 cggctgatga tcatgggcac taggacactc agagctgctc ggtctacagt ggcagaaacc

aggccggggg cttgagaggg cagcggggt tgcctgtgga gcacggggac tttctagggt 3480 gctgggactg ttctcagtct tgactggcgc agcgttacaa gattatatat gcttgtccaa 3540 atgtatcaaa ctgcacactt gaagtgtatg catttattcc atataaagta tacctcaata 3600 gaggtgattt ttaaaaagt

<210> 45

<211> 1883

<212> DNA

<213> Homo sapiens

gatgcagcgt	caggcagccg	ctggggagga	cgcggcggga	gcctcagatg	ccacctactc	60
cccggcctct	ctcccagttg	atgcttctat	tttaggcagc	acattatttc	ctgctgtgat	120
tttttcagcc	ttctaatttg	ggctctgaga	ccacctcata	attccgtgtg	tgttccttga	180
cggaaggggc	agcagagcac	ccagcactgg	atactcagtg	tcagatgagt	gaacaagcaa	240
atggctgatg	tctggtttca	atgtttgcct	acgaggagat	gtactccgct	cccagctctt	300
agcctcacca	tgcagtggaa	gggaaggagg	cttctgaact	ggcagctcta	cattcttccc	360
ctctctgtgc	aacttgttta	gatcacagaa	ctggaaggga	ccccaaaaat	cccattctcc	420
cacccctccg	attagagagg	aagaaacaga	ggcccagact	caacagactt	gccaaaaccc	480
atggacctgg	ttgggggccc	acatctagca	ctttccccag	cctcacagcc	tgccttgttt	540
atttgttcag	cagtttttgt	ttcgccatgg	cacagcttgt	tccgactctg	gaacatttat	600
gagatgagcc	aatttttaaa	aatcatagaa	aataaatggt	ttgctcttgg	agctgaaggg	660
cggggcagcc	agggtaggag	acaggttcca	ggccagttct	ggggcagaat	tttggcttat	720
cctttgctgt	gttttttat	tctcctgcct	tgggaaccaa	aaggatttca	gtgggatttc	780
ctgcctcgat	ttctccagta	ctatgatatg	gaaagactag	aacattcaac	catacacttt	840
ctgattctca	cctccaccat	cattagttcc	attccaaact	ctggctccta	cccattgagt	900
tcaagctaca	gcctgattca	actgatcaac	ctggggatgg	tggtgtcagg	actagcacct	960
ggaccattct	gcctcctctg	cctgcaacat	cctctctatc	tgcttgtgaa	ctcttctcct	1020

1080 tcaaaaccca geggttacgt caccacttct aaaaccttga actgattccc cacgtagtcg 1140 gccagctact ttttaaattt aaaaaagccc aaccagaata aacaggatag ctaaaatgct 1200 gaatttettt gettttttt gaetggatat taacteagtg tactaatgtt agetattate 1260 ttgtgttatt tgatcataat ttatttgcag atatgtaaat atgtgattac caaaaacttg 1320 taaatgaata cttgctaaat tcaatttttt tggccaacaa aaataattta tttaaacgtt 1380 aattatgtcc aggatggtag agggagtggg ataaggatga cacaaggact cctggtggta 1440 aaaaggtgac tctaaggtcc tatctagcct tttgatacaa catggctggc tcatttcccc 1500 aaaaggcctg gtacatagta ggtgctcaaa aagtatgcat tatatgtata agtccgtgag gacgattaca ctctctgacc ctggggtcaa tgaagcttct gtcaacccca gttgaatgtc 1560 1620 ccatgagggg ccaggctaag aatccattca agagctgtcc taggccagat acagtggctc 1680 acacctgtaa teccageact ttgggaggee aaggeaagea gateacetga ggteaggagt 1740 ttaagaccag tctggccaac atggtgaaac cctgtctcta ctaaaaatac aaaaattagc 1800 caggcatggt ggcgggcgcc tgtaatccca gctactcggg aggctgaggc atgagaatcc 1860 cttgaaccag gaggtggaga ttgcagtgag ccaaaatcac tccactgcac tcaatcctgg 1883 gcaacagagc gagactcttt ctc

<210> 46

<211> 1819

<212> DNA

<213> Homo sapiens

<400> 46

ttttgetete etggeeteeg tgeeceeggt gtttggaete tacaettett tetteecegt 60 ceteatetae agettgetag gtactgggag acaeetgtee acaggaactt tegeeatact 120 cageeteatg acaggetegg eegtegageg getggtgeeg gaaceeeteg tggggaatet 180 gageggaate gagaaggage agetggaege teaaegggtt ggggtageeg eggeegtgge 240 ettegggage ggggegttga tgetggggat gttegtgetg eageteggeg tettgteeae 300 etttttgtee gageetgtgg teaaggeget gaeeageggg geegegetge acgtgetett 360

gtcccagctg	ccgagcctct	tggggttgtc	cctcccgcgc	cagatcggct	gcttctctct	420
cttcaagacg	ctggcctcct	tgctgactac	gctgcctcgg	agcagtccgg	ccgaactgac	480
catctccgcg	ctcagcctgg	cgctgctcgt	gccggtcaag	gaattgaacg	tgagattccg	540
agaccggcta	cccacgccga	tcccggggga	agtcgtcttg	gtgcttctgg	cctccgtgct	600
ctgcttcacc	tcttctgtgg	acacaagata	ccaagtccag	atagtggggc	tgttgcctgg	660
aggatttccc	caacccctcc	tccccaacct	ggctgagctg	cccaggattc	tggctgactc	720
gctgcccatt	gcactggtta	gttttgcggt	gtctgcctcc	ctggcctcca	tccatgcaga	780
caagtatagc	tacactattg	actccaacca	ggagttcctg	gcacatggtg	cctccaacct	840
catctcctcc	ctcttctctt	gctttcccaa	ctcggctacg	ctggccacca	ccaatctact	900
ggtggatgct	ggtgggaaaa	cacagctggc	aggcctcttc	tcctgcacag	tggtcctgtc	960
ggtgctgctg	tggctggggc	ccttctttta	ctatctgccc	aaggctgtcc	tggcttgcat	1020
caacatctcc	agcatgcgcc	aggtgttctg	ccagatgcag	gaacttccac	aactatggca	1080
catcagccga	gtggactttg	ctgtgtggat	ggtcacctgg	gtggcagtag	tgaccctgag	1140
tgtggatttg	ggcctggctg	tgggtgtggt	cttctccatg	atgactgtgg	tctgccgcac	1200
ccggagctcc	tccaggtccc	ggggctctgc	atcctgagct	atccaacacc	actgtacttt	1260
gggacccgtg	ggcagtttcg	ctgcaacctg	gagtggcacc	tggggctcgg	agaaggagaa	1320
aaggagactt	caaagccaga	tggcccaatg	gttgcagttg	ctgagcctgt	cagggtggtg	1380
gtcctagact	tcagtggtgt	cacctttgca	gatgctgctg	gggccagaga	agtggtgcag	1440
ctggccagcc	gatgtcgaga	tgctaggatc	cgcctcctcc	tggctcagtg	taatgccttg	1500
gtgcagggga	cactgacccg	ggtaggactc	ctggacaggg	tgactccaga	tcagctgttt	1560
gtgagtgtgc	aggatgcagc	tgcttatgcc	ctggggagcc	tggtaagggg	cagtagcacc	1620
aggagcggga	gccaggaggc	actgggctgc	ggcaagtgag	gcaggggagc	tcactgaccc	1680
aaagatttgc	accgtgtggg	tctgacctca	tcatgtggag	tgcagagggc	cctgatgaca	1740
tgtgtgtgat	gaggaccatg	acccttgaac	cccttacct	aacgtaacta	ataaaatgaa	1800
gctgagagct	ttggaatcc					1819

<210> 47

<211> 3162

<212> DNA

<213> Homo sapiens

agaggaggct	ccgtgtctgc	agctagtgtg	tcaactcagc	gtttctcctc	tcgtccctgg	60
tgaggtgtag	cggcggcacg	cggctggaga	tccctgtgg	cctccagttt	aggaagggtc	120
cagcatccca	agggaggggt	gtgtgggcga	ggggtctctg	ggcccggggt	cgcggctgtg	180
aggagaggat	gcccgcgcgg	cggcatctca	ggcacctgga	ggaggccgcg	ctttctcctc	240
agggaaccgg	cgccttggca	gccccggcg	acgccgcccc	cttcgcggcc	taggttggtc	300
tggtgagccg	ggaagcgggc	gtcgttcgca	gcgccgctgt	gaccaccgcg	tcccgggcgg	360
agctgggctc	agtgccggcc	tgggcctaga	gtccgagcct	cgagctgccg	gcgtgggggg	420
tcgcgagtgg	cctaatacgg	cctcgaagcc	gaaggacccg	agtccgagct	cgcactccga	480
cccgctggtg	ctgtggaaaa	ctcaggtggc	cttccgcttt	cgtagcctct	aaagtgggga	540
ccaagacttt	cacctcttag	gattgtagtc	gggattaaaa	gattttcccg	gaagagctaa	600
agatggctga	atttctagat	gaccaggaaa	ctcgactgtg	tgacaactgc	aaaaaagaaa	660
ttcctgtgtt	taactttacc	atccatgaga	tccactgtca	aaggaacatt	ggtatgtgtc	720
ctacctgtaa	ggaaccattt	cccaaatctg	acatggagac	tcacatggct	gcagaacact	780
gtcaggtgac	ctgcaaatgt	aacaagaagt	tggagaagag	gctgttaaag	aagcatgagg	840
agactgagtg	ccctttgcgg	cttgctgtct	gccagcactg	tgatttagaa	ctttccattc	900
tcaaactgaa	ggaacatgaa	gattattgtg	gtgcccggac	ggaactatgt	ggcaactgtg	960
gtcgcaatgt	ccttgtgaaa	gatctgaaga	ctcaccctga	agtttgtggg	agagaggggg	1020
aggaaaagag	aaatgaggtt	gccatacctc	ctaatgcata	tgatgaatct	tggggtcagg	1080
atggaatctg	gattgcatcc	caactcctca	gacaaattga	ggctctggac	ccacccatga	1140
ggctgccgcg	aaggcccctg	agagcctttg	aatcagatgt	tttccacaat	agaactacca	1200
accaaaggaa	cattacagcc	caggtttcaa	ttcagaataa	tctgtttgaa	gaacaagaga	1260
ggcaggaaag	gaatagaggc	caacagcccc	ccaaagaggg	tggtgaagag	agtgcaaact	1320
tggacttcat	gttggcccta	agtctgcaaa	atgaaggcca	agcctccagt	gtggcagagc	1380
aggacttctg	gagggccgta	tgtgaggccg	accagtctca	tggcggtccc	aggtctctca	1440
gtgacataag	ggtgcagctg	acgagatcat	gttgccttgt	gaattttgtg	aggagctcta	1500

cccagaggaa ctgctgattg accatcagac aagctgtaac ccttcacgtg ccttaccttc 1620 actcaatact ggcagctctt cccccagagg ggtggaggaa cctgatgtca tcttccagaa 1680 cttcttgcaa caggctgcaa gtaaccagtt agactctttg atgggcctga gcaattcaca 1740 ccctgtggag gagagcatca ttatcccatg tgaattctgt ggggtacagc tggaagagga 1800 ggtgctgttc catcaccagg accagtgtga ccaacgccca gccactgcaa ccaaccatgt 1860 gacagagggg attcctagac tggattccca gcctcaagag acctcaccag agctgcccag 1920 gaggcgtgtc agacaccagg gagacctgtc ttctggttac ctggatgata ctaagcagga aacagctaat gggcccacct cctgtctgcc tcccagccga cccattaaca atatgacagc 1980 2040 tacctataac cagctatcga gatcaacatc aggccccaga cctgggtgcc agcccagctc 2100 teettgtgtg eegaagetea geaacteaga eageeaggae ateeagggge ggaategaga 2160 cagccagaat ggggccatag ccctgggca cgtttcagtg attcgccctc ctcaaaatct 2220 ctacccagaa aacattgtgc cctctttctc ccctgggcct tcagggagat acggagctag 2280 tggtaggagt gaaggtggca ggaattcccg ggtcacccct gcagctgcca actaccgcag 2340 cagaactgca aaggcaaagc cttccaagca acagggagct ggggatgcag aagaggaaga ggaggagtaa tggtgtctcc agagacttta catcggttcc tgtcttctgt gcacagcagc 2400 2460 acttgccgct gtgcaggccc acctctttgg ctctttgggt gggagagttt ttccagattt tagatttttc taggttatgg ccattttgtg tcttttgagg ttgtgctgtg ggggtttggg 2520 2580 tttgagggaa gggagcaggg tggcggttga ggaacgcttc agccttagct gctacctttc 2640 ggcagcagtg aaatacaagc tgcagcctcg gctgccaggg ctcccttttg acttattgtc 2700 gccactgccc cttggtgctg tgtggtccca gtggaaggag gggaagattt tggaaacctg 2760 gtagccacca gtaaggtgat tctccgccct gttggggcct aaatttgggg gcttttgggc 2820 aacctctccg tgtactgcgt ctgtccacac tcgattgggc cccaggtgtg tatgaggcgc 2880 tctggtaagg tgctcaggcc agttgcaatg tctgtcagta acgaggcttt tgatgtgttg 2940 agctggaggt gagtggaccg ggggctgtgt tttaagctgc ttccttggca tttggcatca 3000 ctgccttctg ttcccggggg agcatggatc ttttgtcctc actgctttct aatggggagg gctgagggct ccctgtcccc acagcaggta tgttgggctc tgccccagcc ccacacttgc 3060 tctgaaaacc aagtgtcaga gccccttccc cttgttttta ttttactgtt ataataatta 3120 3162 ttaacttcct tgtaatagaa ataaagtttg tacttggagt tc

<210> 48

<211> 2189

<212> DNA

<213> Homo sapiens

<400> 48

60 ggttccaaac agccgtggcc cgcggtgtct ggcgctcggt gggtgtggtt gcccctagtt 120 tgaggcctgc ccgattaccc gcaagacttg ggcagcccg ggcgccgctc cgaccacgac 180 agggaaaggt aaagcgaact gtcctccttg gggctagcca ggctcccctg cgagggggaa 240 ggtaatggtt tcaagctgcc cgggctgggt tccgaatctc taggacgcca tggctgcgat 300 ctcctcgctt tcctggacat cttacctccg gatgtactcc agtctcagtg cccctcaata 360 aacgttaacc tgctttgcca aaatgtaaat gtttaaaaag gtgaagaagc aaggaattgt 420 tcgttttacc ttaaggttaa gatttacttt aaaggtagat ttgtgctgta gcagaaactg 480 gtgacaaatt gccttcctct tattacctgg gaagataact actggttttc aacttgtgat 540 aaatactcct tccgttgtct tttgccccca gccagatctg tttcaccgag aaggggtagt 600 ttgcacaagg tagtaacttt ctccaagttc ccatctagct ttcttaacta acctttttc 660 tctcctttgg gcggcagttg atctgctgga cacttacttg ccttaacaag gtttgttaaa 720 cacctagtat atgccaggag gtatgccagg gattggggat gcagaaataa agaagatgtg 780 ttcgcagtgc ccaagttcac tcaaacctcg agggggagcg tgttgtcaag tgaacagata gttctagaat ctagacaatg cgacacattc ttgggtaggt ttatggttgc gcagaggaga 840 900 ctaatggaat ggatgaccta aaagtggact gggatggggg tggcagggct gagtctgtga 960 gggtgggcgg gagggaacct agtcccagag tcttctgcag cctggaccag actacttaag 1020 cactgctggg tttagactgt cctttaaaat aagagccgct agaagtgaac ttctcattct 1080 gtccgtccct aattctgtcc ttctctaaaa ggaaccttaa tctcatcttt aaaataagga gaattactga gtgacctgaa ggaccctttt cagctggaaa gtctgaactg accaacactg 1140 1200 gatgaatttg accatttctt aggagactgg aatgttaagt ttctataaat gaatgaacca 1260 gttctctctt gtttggagca atgctgaaat tccaagaggc agctaagtgt gtgagtggat 1320 caacagccat ttccacttat ccaaagacct tgattgcaag aagatacgtg cttcaacaaa

1380 aacttggcag tggaagtttt ggaactgtct atctggtttc agacaagaaa gccaaacgag 1440 gagaggaatt aaaggtactt aaggaaatat ctgttggaga actaaatcca aatgaaactg 1500 tacaggccaa tttggaagcc caactcctct ccaagctgga ccacccagcc attgtcaagt 1560 tccatgcaag ttttgtggag caagataatt tctgcattat cacggagtac tgtgagggcc 1620 gagatctgga cgataaaatt caggaatata aacaagctgg aaaaatcttt ccagaaaatc 1680 aaataataga atggtttatc cagctgctgc tgggagttga ctacatgcat gagaggagga 1740 tacttcatcg agacttaaag tcaaagaatg tatttctgaa aaataatctc cttaaaattg 1800 gagattttgg agtttctcga cttctaatgg gatcctgtga cctggccaca actttaactg 1860 gaactcccca ttatatgagt cctgaggctc tgaaacacca aggctatgac acaaagtcgg 1920 acatetggtg agtgggetag tgggetagae tetteatetg etteectaaa agaatggtae 1980 attttgtctt tcagctcatt tacttactgc atacattcac tttatccctt tgacatgaat 2040 atttctgtga ccagagtaaa agaaggtctt ttgcatttag aactcaatat atttcattaa 2100 actagtttca aaaattcttt ttattcagtg ataattggtt ggttttggat ttttggttcc 2160 tgaatcacaa gggaaagttc ttaatgtacc ataagcatta aattttaata catttctgtt 2189 aacctattaa ataaagtatt tgtaaccct

<210> 49

<211> 1693

<212> DNA

<213> Homo sapiens

<400> 49

attcacctcg cggccacagg agctcagcgc cggcgccgcg ccgcccagcc ccgccgagag 60 gggcgcactc gccgccgcg ggcccgccgc cgctcaccgc agcccctcc tggcgacccg 120 caagtcctct caaactgtga gtaactaagt ggtttgtgca tcattccaga agcaaagcta 180 aaatttttag cggtgttgtc gacttgacct gctaatttcc tgttctggaa tcgagagaag 240 actcctcaac aagttgctgc aatgtctgtg tctaatctat catggctgaa gaaaaagtcc 300 cagtcggtgg atattaatgc tccagggttc aaccctttgg ctggtgcagg aaagcaaaca 360

ccacaagcca	gtaagccccc	ggcacccaag	acccccatca	ttgaagaaga	gcagaacaat	420
gcagcaaata	ctcagaaaca	tccttccaga	aggagcgaac	tgaagaggtt	ctacacaatt	480
gacactggcc	aaaagaagac	cctagacaag	aaagatggaa	gacgaatgtc	ttttcagaaa	540
cctaaaggga	ctattgagta	tactgttgaa	tcaagggatt	ctttgaatag	catagccctg	600
aagtttgata	caacacctaa	cgaacttgtt	caattaaata	agttattctc	ccgagcagtt	660
gttactggac	aggttctgta	tgttcctgat	cctgaatatg	tctccagtgt	tgagagctct	720
ccatctctaa	gccccgtaag	tcctctgtca	ccaacatcat	ctgaggctga	atttgataag	780
accactaatc	ctgatgtcca	tccaacagaa	gcaactccct	catctacttt	cactggtatt	840
cgacctgcac	gagttgtatc	ttcaacttct	gaggaggagg	aagcatttac	tgagaaattt	900
cttaaaatta	attgcaaata	tattaccagt	ggcaagggca	cagtcagtgg	tgtgctgcta	960
gttacaccaa	ataatataat	gtttgatcca	cataaaaatg	accctttggt	tcaagagaat	1020
ggctgtgagg	aatatggcat	catgtgtcca	atggaagagg	tgatgtcagc	tgcaatgtac	1080
aaagaaattt	tggatagcaa	aataaaggaa	tctttaccca	tagatataga	tcagctatca	1140
ggaagggact	tctgccattc	aaagaaaatg	acaggaagta	acactgagga	aatagactca	1200
agaatccgag	atgcaggtaa	tgatagtgcc	agcactgctc	ctaggagcac	tgaggagtct	1260
ctttctgaag	atgtgttcac	agaatcagaa	ctttccccta	tacgagagga	gcttgtatct	1320
tcagatgaac	tgcgacaaga	taaatcttct	ggtgcgtcat	cagaatctgt	gcaaactgtc	1380
aatcaggctg	aagtagaaag	tctgacagtc	aaatcagaat	ctactggtac	tcctggtcac	1440
ttaagatctg	atactgaaca	ttctacaaat	gaagttggga	ctttatgtca	taaaactgat	1500
ttaaataatc	ttgaaatggc	cattaaggaa	gatcagattg	cagataactt	tcaaggaata	1560
tcaggtccta	aagaagacag	cacaagtata	aaaggtaatt	cagaccagga	ttcttttctt	1620
catgagaatt	cgttacacca	agaagagagt	caaaaagaaa	atatgccttg	tggggaaaca	1680
gcagaattta	aac					1693

<210> 50

<211> 2028

<212> DNA

<213> Homo sapiens

atgcggaagg	ggcggtagcc	ggccgggcct	gggaacgtgg	ctggttggag	gaggtagatc	60
accctttctg	cgggggacga	tttcgtcggt	ggctgctacc	atgaggttga	atcagaacac	120
cttgctgctg	gggaagaagg	tggtccttgt	accctacacc	tcggagcatg	tgcccagcag	180
gtaccacgag	tggatgaaat	cagaggagct	gcagcgtttg	acagcctcgg	agccgctgac	240
cctggagcag	gagtatgcca	tgcagtgcag	ctggcaggaa	gatgcagaca	agtgtacctt	300
cattgtgctg	gatgccgaga	agtggcaggc	ccagccaggc	gccaccgaag	agagctgcat	360
ggtgggagat	gtgaacctct	tcctcacaga	tctagaagac	ctcaccttgg	gggagatcga	420
ggtcatgatt	gcagaatggt	aatgatagta	gcaacttcag	agttgttgag	aattaaatga	480
gatggtgtct	gccaagtgcc	cgcactggag	cctggcacac	ggcgtcagcg	ccgctcctgt	540
tgtctctcct	agagcccagc	tgcaggggta	agggccttgg	cactgaggcc	gttctcgcga	600
tgctgtctta	cggtaagaaa	gtgtgagcag	acaatgcggg	aagtgggcag	gccccaggtg	660
aactttgttc	aggtgtgagg	gttgggggca	ggtgaaggtt	cctcctctgc	agcttgggac	720
aggagggtgg	gggcaggcgc	ctccttactt	gcccctgtct	catctcctct	gcgaggagtg	780
accacgctag	gtctgaccaa	gtttgaggct	aaaattgggc	aaggaaatga	accaagcatc	840
cggatgttcc	agaaacttca	ctttgagcag	gtggctacga	gcagtgtttt	tcaggaggtg	900
accctcagac	tgacagtgag	tgagtccgag	catcagtggc	ttctggagca	gaccagccac	960
gtggaagaga	agccttacag	agatgggtcg	gcagagccct	gctgatggct	gggccttgtg	1020
ggcagccact	ctgtgtgagc	agggtgttgg	gcccatacac	ttcaaagacc	agagccctgc	1080
actgggagag	tgctcctggc	ccaggctggg	aatcaccttt	cgaggccctt	cagactctgg	1140
cggggcttgc	tgtggcctcc	ctccagctag	tggtgtggct	gagcagactc	cagggccagg	1200
gccagttccc	ttctccctc	ccggccaaac	ccagacccag	actctaggag	gctggaatgg	1260
agggcaggga	tccatgggag	atgtcgggat	gaaggtggga	gccggaggtg	cagggggacc	1320
tggaacatgg	atgggagtgg	acaggccttt	ctccttagag	gccagaagtg	ctgccctggc	1380
tgggagtgaa	gctccaggca	ctaccagctt	tcctgatttt	cccgtttggt	ccgtgtgaag	1440
agctaccacg	agccccagcc	tcacagtgtc	cactcaaggg	cagcttggtc	ctcttgtcct	1500
gcagaggcag	gctggaaaac	acccctctgc	tgataaagct	cagggggcac	tgaggaagca	1560
gaggcccctt	gggggtgccc	tcctgaagag	agcgtcaggc	catcagctct	gtccctctgg	1620

tgctccacg tctgttcctc accetccate tctgggagea getgcacetg actggccacg 1680 cgggggcagt ggaggcacag getcagggtg geegggetac etggcacett atggettaca 1740 aagtagagtt ggcccagttt cettccacet gaggggagea etetgactee taacagtett 1800 cettgeeetg ceatcatetg gggtggetgg etgtcaagaa aggeegggea tgetttetaa 1860 acacageeac aggaggettg tagggeatet teeaggtggg gaaacagtet tagataagta 1920 aggtgaettg eetaaggeet eecageacee ttgatettgg agteteacag cagaetgeat 1980 gtgaacaact ggaacegaaa acatgeetea gtataaaaca aacattat 2028

<210> 51

<211> 2294

<212> DNA

<213> Homo sapiens

<400> 51

60 gagctggggc gccggagtcc acgcaccggg gatggaggcg ctgggtgacc tggagggacc 120 acgcgcacca ggaggtgatg atcctgcagg aagtgcagga gagacccccg ggtggctttc 180 gagagaacag gtttttgtac tgatatcggc agcttcggtg aacttaggtt ccatgatgtg 240 ctattctata cttggaccgt ttttccccaa agaggctgaa aagaagggag ccagcaatac 300 aattatcggt atgatctttg gatgttttgc tttgttcgag ttgctggcat ccttggtatt 360 tggaaactat cttgtacata ttggagcaaa atttatgttt gtagcaagaa tgtttgtctc 420 aggaggagtt acaattetet ttggtgtatt ggaccgagtt ccagatggge cagtatttat 480 tgctatgtgt tttctagtga gagtaatgga tgcagttagc tttgctgcag caatgactgc 540 atcttcttct atcctggcaa aggettttcc aaataacgtg gctacggtat tgggaagtct 600 tgagactttt tctggactgg ggctaatact aggtcctcct gtaggtggct ttttgtatca atcetttgge tatgaagtge ettttattgt tetgggatge gtegttttge tgatggtace 660 720 actcaatatg tatattttac ccaattacga gtctgatcca ggtgaacact cattctggaa 780 actgateget ttacceaaag ttggeettat ageettegte ateaacteae teagetegtg 840 ttttggcttc ctcgatccta ctctgtctct ctttgttttg gagaagttca atttaccagc

900 tggatatgtg ggactagtat tcctgggtat ggcactgtcc tatgccatct cttcaccact 960 atttggtctc ctaagtgata aaaggccacc tctaaggaaa tggcttctgg tgtttggcaa 1020 cttaatcaca geegggtget acatgetett agggeetgte ecaatettge atattaaaag 1080 tcagctctgg ctgctggtgc tgatattagt tgtaagtggc ctctctgctg gaatgagtat aattccaact ttcccggaaa ttctcagttg tgcacatgaa aatgggtttg aagagggatt 1140 1200 aagtacattg ggacttgtat caggtctttt tagtgcaatg tggtcaattg gtgcttttat 1260 gggaccaacg ctgggtggat ttctgtatga gaaaattggt tttgaatggg cagcagctat 1320 acaaggtcta tgggctctga taagtggatt agccatgggc ttgttttatc tactggagta 1380 ttcaaggaga aaaaggtcta aatctcaaaa catcctcagc acagaggagg aacgaactac 1440 tctcttgcct aatgaaacct agtccgatgg atcctggatt gatacaaggt tgagaaatga atgctcctgg ccttaaacat caccgtagga agggttttta aaattttacg cgcaaaactc 1500 1560 cgtggacccc gtgccagtgt cttggaagtg tcaacgtgtt tttggatgat cctgtattgg 1620 gctgtactta ctgtgatact gaaaagctgt cctgctgaag cagctatatt tgaaatatta 1680 aaacttgtcc ttaaagatgt tgttattaac tcgagttagt tcttatttcc tctgtttatt 1740 ttttattcta agtacactga ttctgtgaat gtaccttttt tattaacagg gaaagaaatg 1800 aattaatttg atatgctcta aatacataaa ggtgcttcaa aatatgtaga aacattacta 1860 1920 tgaaatcagt ttttaaaaga tatactttct ctttgtcctg aggtttttcg gtcttgttca 1980 aaaggaagaa ttcttgcctg ccatacagaa actctctagc actccctgac cttaagcttt 2040 tctaaaaatt ctgtttgtgt gaaaagtaca agaataacaa tacttacaac ttccattttt 2100 gtaacctacg ttcacttatg atctggattt ataaacatta cttggtataa cgtttttcat ttcctttaat gtctctgttt tttggctcta ccatctgttt tgtttttgtt tttatctata 2160 2220 tettggtaga tgtattteat eectagagea ggteageete etteeeetaa tgegaatget 2280 tgttttgtta gggaagggct tcctccaact tcgtgtgaaa ttgtgatgtt gaagtgaata 2294 aatgtctatt gtgt

<210> 52

<211> 2894

<212> DNA

<213> Homo sapiens

ttcaggcaaa	cagtccactt	actagggcgc	cagtttatta	caaaggatat	gttacaggat	60
acacatgaac	agccagatga	agagataggt	agggtgaggt	ctggaagggt	cccgagcatg	120
ggagcttctg	accctgtgga	gttgggagtg	agccaccctc	ccagcacatg	ggtgcgttct	180
taatcaccaa	gggaagctcc	tcaaaccctg	tagttccaaa	tttttacgga	ggcttcatca	240
cataggcatg	atggattatt	aactcagtct	ctagcttccc	tcccataccg	ggagggtagg	300
gggtggggct	gaaagttccc	agcttctaat	catgccttgc	tctttctgtg	atcagccccc	360
atccaggacc	tcattgcctc	attggaacca	aagatgcccc	tgtcacccag	gaaattccaa	420
aggatttagg	agctctgcgt	caggagccag	gatcacagac	cagataatag	aacaaaagat	480
gctcctggca	ccctgctgc	ttaggaaatg	acacaggttt	taggatctct	gtgtcaggaa	540
ctggaggctg	agaccaacac	atatgttatc	atttcacagt	gataggtcaa	acaggtcatg	600
gtaatggtgg	gagctacctc	actgggggcc	tatgggggtg	aaaggagatc	atgggtgccc	660
tcagcacacc	acttgggtga	agggttagta	ccagacccca	cttctggttt	tgtctgccag	720
cctggggctt	tttttcccc	ttacctatta	gattatttca	taactctttt	cctaccagaa	780
atgcatctcc	tgctagactg	gtccagatca	aaaccctgct	ctttcactga	ggctctcccg	840
gttggcatat	cctgcagaat	ccctccgtcc	agagatcagt	cggtcctgtg	gttgtttcac	900
aagtgactcc	tctgtccaga	gatcagtcgg	tcctgtggtt	gtttcacagg	tgacacctcc	960
gtccagagat	cagttggccc	tgtggttgtt	tcacaggtga	cccctccatc	cagagatcag	1020
ttggtcctgt	ggttctttac	ccctggtggt	catttcactc	accctcatat	gcagtcgttc	1080
ctgtgtccat	cttccttcct	ggagcccaca	ttcctccagg	ccaggactgt	ggcttctctc	1140
tgaattgccc	cacagctttt	ttccaagtgc	tctgctcaca	gtagacatca	aatagatgct	1200
tgttgagtca	tggtgcggga	atgagggagc	ctagagaata	tctttctgga	tcctctactg	1260
ttgatactag	aaggagccta	agaagccacc	cggctgatgg	ttttctgacc	ctgcctttat	1320
cagcagagcc	ttttttcaaa	tgaggtgttg	cacaaaagcc	tgatgtgtgg	ctgtgtaaaa	1380
cagaaataaa	caatcttcta	gccaaagccc	cattcccaca	gttcaggggg	ccataggccc	1440
aggaattcca	taggatgtca	ctgcccaact	aggaaactgc	tcagttagct	gaaccccttc	1500

1560 tgagggccag aggaggacag gatttgtccc aatccagaca ctcggccagg gaataagggc 1620 tgaaactcat ctctcaacct agtccagccc tcccctctt tggattgtca ttatcaagtt 1680 gattgattgt atattatcag gactctctta accacaggtg ccagaagccc atgccagaag 1740 cccaacccaa agtggcttaa accaaagaga aatttatagg ctggtataac taaaagattc 1800 agaggtagca ctggctcatg catgagtgga ccggggtgac aagatatcag atggcacctg 1860 actgtcacca ccacaggcag actgttcacc atctcagctc tgtccccttc ctttgtcaca 1920 atgacgaagc caccgcatct cccggctaat ggtgtaccag cctggaaaga cagcctccct 1980 ctctgattgg cttcagcaca agtcacagga atgactgcct ggtctgaccc gtctcctgtg 2040 tgctttcttt gggagtaaag agttaacagg cccttcccc ttccacagag agtgcttccc 2100 ttatcctgcg gaagetetge eectggatga aggaggagag eggetatgtt agtgetgatg 2160 actggcacac tgcacttgcg ctaggaagac agcatgaact gcacccctcc agggaagcca 2220 cggcctgggc tcccctgcat acagtggttc cttaactggg cacgagtccc ttgctgggac 2280 ttaggaaaac tctgcctaaa gtccattgca agaaatactg atccctgtgg gatgtatatg 2340 tggctggttc ccttgctcac tgagagacta gaaaacagca cctggacccc tgggctggtt 2400 ccctctgagg aaaggatctg tgtcatgagt gaagcccggg caggtgtggt ctgttcaact 2460 ttgatcatct ggttgagcct aaggtgacca agagtgggcg gtgcacccct gattctgttg ctgtgactga ggaaatgcta agctctgttt ggccaggcct gggcagcctg cctctggagt 2520 2580 aggggtggag agccatcctg caacacgagg ttaccaggag aaggagtttt ggttgggcac agacatccag tgtccactcc aggatgtttg ggagacacct tgagaactct tcctaaaagc 2640 2700 tgcacttaac caagctcctg gtggttctgt gatcccttac attttctcca gaggcagaga 2760 gttggctgac tgacttttgc ccttgggcag attgtgaggc tctacccagc atgctggtat 2820 attatgttcc ctcagatggg ggtgagaccc ttggcctggg ggctgtaaaa tgatctgttt 2880 ctgtgaggag actttccatg gtgagattgc tagtgtctca gagaataaag gacagaacca 2894 gtccaagtca aagc

<210> 53

<211> 1727

<212> DNA

<213> Homo sapiens

60	gggcttcctc	gccaacgcca	aatcctcctg	ctgagccgtg	atgatatcgc	cgctggcccg
120	tctcccact	tctctgtctc	cctcctcct	cacttccctc	attgcaggga	aggctttgtc
180	tgttgaagga	tgtcacttgc	atggattttc	ccaatttgag	ctagcttaag	gcctctcttt
240	aagtctgtgt	cacataatgc	aaatgaaacc	gatttcgtgc	agcccaggtg	gtcctggtcc
300	ccatgggtga	tgaacaggag	cttcgcctta	ggcgcgtgcc	gtctgcgatc	ggaagtgatc
360	ccagggcaca	ccatctgtct	cgtctgaggt	cgccggggtc	tcggctgggc	cacgagcgcc
420	ctggggaacc	aagatgtcag	gtgaaacggg	ccgggcacgt	ctggacagag	gaccccaggc
480	cagaaaaagcc	gctgttcctg	aaacctggta	atgaggaaag	cccaaccttg	ggccgcagct
540	accgtccacg	tcccatcctc	acctggcttc	ccacgatggt	ccgcatatct	acatggctcg
600	cagcttcatc	ttagacagag	gcagaaggct	gacccgagac	tcccatccca	tctactccct
660	tccggcacat	caaagtgcca	cccagctcct	ggtacctgct	actgggctga	aggaatctgg
720	aagactccca	caggggatgg	tggctgcttg	gcagcttccg	gggacaagat	ccacccacgt
780	agtctgagcc	tgccacgtcc	gtcaccgcga	atgcccaagt	ctaacatcac	cagacgcctg
840	ggcttcgtgc	tccagcgtgt	atagccggcc	tccttgttgc	catgtccctg	attcctcgcc
900	tggggcagac	gggttggcac	acggttgctg	actttctgcc	ccgtcgtgtg	agcgaccaga
960	ctctcttcgt	ggcaggacgc	cgctgggact	gcagctggag	gttctgggtt	ctgctggggg
1020	gcctcacagc	cgtgtgggct	cggcgtgaag	cgtcgactcc	ggcccatcca	gctgccccag
1080	ggcagcactg	cggctctgct	cccgcggccc	gggggctccc	caggactgct	ctggcagctc
1140	cggaagggaa	acgtaggttc	ccctgaaggc	cacacagccg	aactcacctt	ggccagaagc
1200	gcccatttca	aagctccctc	tgggagtccc	gccatactca	tgggattcgt	ccttgggaaa
1260	cgccaggccc	agagaccctg	acgacctggc	acagctgctg	ataggagggg	ctccatgagg
1320	aactcctcgt	aatggtgaga	cggcctcgag	cttgcacttc	gcaccctgat	caccccaccg
1380	ctgaggccct	gccagcagct	tctgaccagg	tcagtggccc	agccacccgg	gttgtttata
1440	ttttctaaac	cctctctggt	ccacacccac	ccctcactc	cggccccctc	cccccgccc
1500	agccccgggg	gctctgggga	gcccctgcgg	cctctctctg	cattctaacc	tcctcctccc
1560	ggagtgggtt	ccgggggctg	cccgaggccc	tgctgggctc	ggggccaggc	acagtaggca

aaagccgtcc agggcttcgc tagggagggg ctccagcaag accctgttta aacctccttc 1620 ccaccacagc gtgggcgcca cgtcgcactc tctgggtatg tctcaaggtg tggataatgc 1680 agacttctga gtttaaaaaa ataccaaaaa taaaataatc aggcatc 1727

<210> 54

<211> 2705

<212> DNA

<213> Homo sapiens

gacggcaagc	gctccgggaa	gcagaagagg	acagaccgcg	tcaagggcaa	atgcaccctc	60
atgtgagccc	ggaacgcccg	cctgcccgcc	gcccaccccc	actgaccccc	gctgcctccc	120
ccaacaccga	caccctcctc	ggcctcctcc	tcttctctca	tccttcctcc	gacacctcgg	180
ctggggaaac	cgaggccacc	gccccccct	ccgctgcccc	tgcccacccc	gaggcagggc	240
tggggctttt	cttcctcccc	tgctctctct	ccaccctcct	gttctgtctg	taccctccaa	300
aaccaagagc	cggaggtggc	cccttgtcc	tgcagatggg	aaaacaggat	ggggagctgg	360
caagaggagc	tgcttgttcc	caccaggacc	agaggaggct	gcgtttcccc	gtttccatct	420
ctttccctgg	ggtgtcccca	gccagacctg	cgcgtcctgt	ccctcacatt	tgatcactgt	480
gaccttctgg	gggagggggg	agttgaaaat	gcacatcggc	ctcagatatt	ttttctttt	540
ttctcctatt	tggtgttaac	atacacccaa	gcccacccgg	cccgtcgtga	cctctgatct	600
gtgcccactc	ctccggttcc	agacgcacct	ctctcctctg	tcttcacagt	ggggtgtggg	660
gcccgtggga	tgggcctcag	gccaccaggc	aataaccaca	gggcctgcag	cagtgcccct	720
gccagccccg	aatcccaccc	ccgggaccag	ccacatccac	agcacaactg	cccgctgga	780
gaggcaccat	gggcgtggag	gggcttcccg	gacaccgccc	acccgggacc	cgcctcttcc	840
accaagacag	agacgttagc	aacgcatggc	gggtggggac	ctggggtgct	caggaggggg	900
tacccggggc	cccggccaga	gatacatcaa	ttacaccccc	gtggggggac	agccgatggg	960
agccagcacc	agcaggatcc	gagggcgccc	cggacagagg	tctgccccac	ccacttcctc	1020
cccaccacct	gtgccccaga	gagcagggcc	tgcccgggaa	ggtggcgtcc	tggagtcgag	1080

1140 tgtacctgca gccatgaggt tctgggtgtt ttttgagaga gtctgagtga caccacactc 1200 gtgtgacccc acagggttgt gtccaacata cacggaagtg gctatgggat ggtgtatttg 1260 tgcaacctgg ggtgcgcgga tgggtgactt gtatctaagt gcatctgcgt gtatacctgt 1320 gtgtgtctgt ctgggatgat atgtttttgt ggcagtctgt gtgtgtaata gtggtgtagg 1380 gtatacagag aggtgggtag ttgtagatac ctgtgtgtgg ttgtcagcaa gactggatat 1440 gtgtgaggtg tctgtgtgaa tctttgtgcc tgtatgagca tgactatatt ttggggagtg 1500 ggtgatatgg tttatctgag agcatttatc tgtaaatatg tttgtcctga ttgagggaca 1560 cgatctgtgt tccactctat agcaacatga ctctagcaat gtgactttcg gttccaaatc 1620 tgtatcagtc agctactgct gtgtaacaaa tgaccacaaa tgtagcaacc agaaacaaca 1680 catgettatt ateteataga ttetgtgggt caagageetg ggtgcaggtt ggetgggtce 1740 tctacttggg atctcaggag gctgcaatca aagcattcgc caggcagagg tctcatctga 1800 aggcctgatc ggggaaggat ttgcttctta gaagctcatg tggttgttgc agcattcagt 1860 teettgetgt tgeaagaetg aaggeeteag tteetegetg getgttgget ggaagetgee 1920 ctttgttctg taccatgtgg gtctctccac agcggggctc ggagcatggc agctaagtta 1980 gtgagggaag gtgagatgga ggttttggtc ttattgggtg tgaggaagca acgtgtgtgt gtgcgcacgc ccttttgtgc agtgagagag agagagagat tgcacacatg tgtctctgta 2040 2100 gtcatgtggc caggtgggac tatgtaggta acagattgct cgtgtctgat ttggtacaag 2160 catgtttgtt ttcctctgtg ttcgtgtgag tgtttactca acaaatgttt attggacaca 2220 ctcagagaga gggagtgtgc acacgtgcgt gtgtgttgct atccagcacg tggaccgggc 2280 tcccagaaga gctggcattg tgtctgagca gagctgggtc cccccaaaac ttgggctggc 2340 ccagggccca ccagcagctg atgttgcctc ctctcctgtc ctggcagtag cttctgggtt 2400 ctgaaggtgc cggagagagt gaggctgggc aggggtctgc ggccctttct cagggacaca 2460 ccctgatage acaateteet tggggeeetg eccaecteea ggeeteteee aceteaggee 2520 ctgcccgacc ctggggagag agggcatctg caataggagg ggacccgagc ctgtcctggc 2580 tgctggccca tcctgcctgg gcatccctgg tgctggggac tgtgccaggc catgcttgct 2640 gtgactccgc ccctgccccc tctccccccg catgtgggtg cccccactcc cccatcgtgg 2700 ggtctgtgta gccttcgctc tagacatagt cttcctgcaa taaaaaagtg gatcctgcat 2705 tcccc

<210> 55

<211> 2249

<212> DNA

<213> Homo sapiens

<400> 55

60 agtgctgagg tggggtgaag gaggaaaggc cgagctggga gaggagcatg cgctcgccac 120 aaccacccc accetgetet ccacgegeca ggteetgeae getgggtggg agggtgacga 180 caaggatgga ggagcagggc cccaccccg ccctcccagg gcgcaccatc tgcagcagag 240 agggeettga getgegtggg aaatgegaat etcetteaag geaggggttt atgteeceea 300 ccccacgggc catgtgacat ttataactct ttggtggaat gagaagaaag gtatttggga 360 tatgatcaac teeggeaatg ceattgtgtg tttaeggeaa eagegggaea gtggtteeag 420 ggggcggccc cgggcctccg tgacgtcacc ggattgtcgc gtcaccgtcg cctaccccgg 480 eggegeaacg egecetgeag gaaagatgae gteacegteg gageteetge agaceagtge 540 gcgctcgggg agttggcgag cgggtggcgg ctgggagacg tcccgagcgc acgggactga 600 caggeggcag aageegggeg gggteegetg ggeteeggae eegtgeeee eeagtteeag 660 ggcggccccg ggcggccccg cccctcggt gaatgccgcg ggccggccaa tccgggcagg 720 ccgcggcgcc gcgcagccta tcagcggcca gagctcgcgt gcgcttccgc gttcgcgtgc 780 gcttccgcgt tctcgtgagc tcccggcccg ctgccgcagg gactgggagc gggctccgca 840 gcgcactcta gcccgcggct cggctcagtc ggtctgcgag gatccggccc gccgccccc 900 960 ggggtccagc gtgcacagct gcgactcggc gccggccggg gagccgccgg cgcccgtgcg 1020 gctgcggaag aacgtgtgct acgtggtgct ggccgtgttc ctcagcgagc aggatgaggt 1080 gctactgatc caggaggcca agagggagtg ccgggggtcg tggtacctgc ctgcggggag aatggagcca ggggagacca tcgtggaggc gctgcagcgg gaggtgaagg aggaggcggg 1140 1200 gctgcactgt gagcccgaga cactgctgtc cgtggaggag cggggcccct cctgggtccg 1260 cttcgtgttc ctcgctcgcc ccacaggtgg aattctcaag acttccaagg aggccgatgc 1320 ggagtccctg caggctgcct ggtacccacg gacctccctg cccactccgc tgcgagccca

tgacatcctg	cacctggttg	aactagccgc	ccagtatcgc	cagcaagcca	ggcaccctct	1380
cattctgccc	caagagctac	cctgtgatct	ggtctgccag	cggctcgtgg	ctacctttac	1440
cagcgcccag	acagtgtggg	tgttagtggg	cacagtgggg	atgcctcact	tgcctgtcac	1500
tgcctgtggc	ctcgaccctg	tggagcagag	gggtggcatg	aagatggccg	tcctgcggct	1560
gctgcaggag	tgtctgaccc	tgcaccactt	ggtggtggag	atcaaggggt	tgcttggact	1620
gcagcacctg	ggccgagatc	acagtgatgg	catctgtttg	aatgtgctgg	tgaccgtggc	1680
ttttcggagc	ccagggatcc	aggatgaacc	cccaaaagtt	cggggtgaga	acttctcttg	1740
gtggaaggtg	atggaggaag	acctgcaaag	ccagctcctc	cagcggcttc	agggatcctc	1800
tgttgtccca	gtgaacagat	agagaggtgg	aggaggtgac	agggagctag	gcagccgtgc	1860
tccctccagt	gcggacttgt	ctccctctga	gggaggcaag	aggctggcga	tcagggatct	1920
tgttgcattg	ggagcagggg	cggctctcct	ggtccccagg	agaġatgctt	tgaggagcat	1980
tcctctagat	tgcacaaggg	acagtgcctt	taaccaagcg	aggagtccaa	agctcaggac	2040
ctgactaccc	tgagggcacg	ctgacgcctc	tccccagggg	gatggggagc	tttctgcacc	2100
cccagtggca	tctcctcatc	acgttctgtg	ccgtccttgg	gaaaggcctg	cattctgatc	2160
cttccaggcc	cttcgagcat	ggaggggcac	tggggaaggt	ccccgaggg	aggagcacgt	2220
tgctgagtaa	agaggtgtta	ctcaccttg				2249

<211> 1689

<212> DNA

<213> Homo sapiens

gcggctgcgg cttctgctca gggaggcgga aggcggcggc gggagcggtc atggaggcgg	60
gcgccggagc cggcgcggga gccgcgggct ggagctgccc gggcccagga cccacagtga	120
ccactctagg ctcctatgag gcttccgagg gctgtgagag gaagaagggc caacgctggg	180
ggtccctgga acgacggggg atgcaagcta tggaggggga ggtgttactc ccagctctct	240
atgaggagga agaggaagag gaagaggagg aagaagaggt ggaagaagaa gaagaacaag	300

360 tgcagaaagg tggcagtgtt ggctctctgt cagtcaacaa gcaccgggga ctgagcctca 420 cggagacaga gctggaggag ctgcgggctc aggtgctgca gctggtggca gaactggagg 480 agacceggga actggcaggg cagcatgagg atgactectt ggagctacag gggctectgg 540 aggatgaacg gctagccagc gcccagcagg cagaggtgtt caccaagcag atccagcagc 600 tccaaggtga gctgcgttct ctacgggagg agatttccct gttagagcat gagaaagaaa 660 gcgaacttaa ggaaatagaa caggaattgc atttggccca ggctgagatc cagagtctgc 720 ggcaagcagc agaggattcc gcaactgaac atgagagtga catagcatcc ctgcaggagg 780 atctctgccg gatgcagaat gaacttgaag acatggaacg cattcgggga gattatgaga 840 tggagatcgc ctccctccgt gcagaaatgg aaatgaagag ctctgaacca tccgaagaac 900 tgcaggagct gcgggaacgc taccatttcc tgaatgagga ataccgggcc ctgcaggaga 960 gcaacagcag cctcacgggg cagcttgcag atctggagag tgagaggaca cagagagcaa 1020 cagagagatg gctgcagtcc caaacactga gtatgacgtc agcagagtct cagacttcag 1080 aaatggattt cttagagcct gatcctgaaa tgcagttgtt acggcagcag ctacgggatg 1140 ctgaagagca gatgcatggc atgaagaaca agtgtcagga attgtgttgt gagttggaag 1200 agctacagca tcatcgccag gtcagtgagg aggagcagag gcggctgcag agggagctca 1260 agtgtgctca gaatgaggtg cttcggtttc agacctccca cagtgtcacc cagtcatccc ctaccccaa tcccccatc ttctccttgc ctcttgtagg cctggtggtc atctcggctt 1320 1380 tgctctggtg ctggtgggct gagacgtcgt cctaatgcag aacatgtttg ggttgtggaa 1440 gcctatggta ttcttggcta ttgcagctgt ggctctgtat gtgttaccca acatgcgaca 1500 gcaggagtca gagttctgcc tcatggagtg atggcagacc ttggccagcg cgagggcaga 1560 tecceagtgg ecaceaect eagetttggg eaggacaeae tgtgeeagaa eceteeceat 1620 atgttccatg tgtccccatc tcctcagcct cagtcaccca ggctgaaaag gcttgtgggg agcggctgac ttccatctcc tgccttgtgt aagaacctga gttccttgta attaaatatc 1680 1689 aactgaatt

<210> 57

<211> 1979

<212> DNA

<213> Homo sapiens

caataaccag	gacaatgaga	aatttacatc	tggatgtcag	cggccaccag	gctcctctca	60
gagggccatc	tcctgtacag	ggtgttgtgg	gggcttcccc	tagacaaaga	aagatggggt	120
ctgcttgctc	tgagttatct	ataataatta	tcttaccttt	ttgtttcttt	ttataatttc	180
tttctttttt	gagacagggt	ctcactctct	tgtccaggct	ggagtgcagt	ggcctgacca	240
tagctcactg	cactgcagcc	ttgacctcct	gggctcaagt	gatcctccca	cctcagcctc	300
cccagtagct	gggacggcag	gcacatgcca	ccacacccag	ctaattgttt	aaatttttgg	360
tagagatggg	gtctcgccat	gttgctcagg	atggtctcga	actcctgggc	tcaaaggatc	420
ctcctgactc	agcctcccaa	agcaccaggt	gtactttggg	cctctcctgc	ctttttgatt	480
gaaagttcca	tgacgggcac	acctggtgat	gggtcctgag	atggaacctg	cttggcctcc	540
ctcagcctgg	cctgagggac	actcatagtc	cctcctctct	ccctaggggc	caaaccagtg	600
ctcctgccac	ctctctggct	gcccctaga	gcctgcccat	cccagcctga	ccaatgtcca	660
cagccaggga	gcagccaatc	ttcagcacac	gggcgcacgt	gttccaaatt	gacccagcca	720
ccaagcgaaa	ctggatccca	gcgggcaagc	acgcactcac	tgtctcctat	ttctacgatg	780
ccacccgcaa	tgtgtaccgc	atcatcagca	tcggaggcgc	caaggccatc	atcaacagca	840
ctgtcactcc	caacatgacc	ttcaccaaaa	cttcccagaa	gttcgggcag	tgggccgaca	900
gtcgcgccaa	cacagtctat	ggcctgggct	ttgcctctga	acagcatctg	acacagtttg	960
ccgagaagtt	ccaggaagtg	aaggaagcag	ccaggctggc	cagggagaaa	tctcaggatg	1020
gcggggagct	caccagtcca	gccctggggc	tcgcctccca	ccaggtgccc	ccgagccctc	1080
tcgtcagtgc	caacggcccc	ggcgaggaaa	aactgttccg	cagccagagc	gctgatgccc	1140
ccggccccac	agagcgcgag	cggctaaaga	agatgttgtc	tgagggctcc	gtgggcgagg	1200
tacagtggga	ggccgagttt	ttcgcactgc	aggacagcaa	caacaagctg	gcaggcgccc	1260
tgcgagaggc	caacgccgcc	gcagcccagt	ggaggcagca	gctggaggct	cagcgtgcag	1320
aggccgagcg	gctgcggcag	cgggtggctg	agctggaggc	tcaggcagct	tcagaggtga	1380
ccccaccgg	tgagaaggag	gggctgggcc	agggccagtc	gctggaacag	ctggaagctc	1440
tggtgcaaac	caaggaccag	gagattcaga	ccctgaagag	tcagactggg	gggcccgcg	1500
aggccctgga	ggctgccgag	cgtgaggaga	ctcagcagaa	ggtgcaggac	ctggagaccc	1560

gcaatgcgga gttggagcac cagctgcggg cgatggagcg cagctggag gaggcacggg 1620 cagagcggga gcgggcgcgg gctgaggtgg gccgggcagc gcagctgctg gacgtcaggc 1680 tgtttgagct gagtgagctg cgtgagggcc tggcccgcct ggctgaggct gcgccctgag 1740 ccggggctgg ttttctatga acgattccgg cctgggatgc gggccaggct gcaggcggca 1800 tagttgggcc cattcgtctt ggaaagggac tggggggtcc caacttagcc ctgggtggc 1860 cgggccggc tgggctggg tgggccccgg tcggctctgg ttgttggcag ctttgggct 1920 gtttttgagc ttctcattgt gtagaatttc tagatcccc gattacattt ctaagcgtg 1979

<210> 58

<211> 1736

<212> DNA

<213> Homo sapiens

<400> 58

60 gtgtgcgggg gccgccattt tccgggagtg ggaggtgcac tttacttcct gactcctttc 120 ctttttccag tggttatcgc ggcgcccacc ggcctctgat ctctgagtct tctccaaccc 180 acagacgttt tttgttgctc tggttccagg accttctcca caactaggcc attttccctg ccaggtgtcc tttttgacct cttgacctct gactcaaagg gcctgctccc cgtcatgtct 240 300 tcggcctgga gaagagccag ctcctgaagg aggcctttga taaggccggc ccggtcccca 360 agggcagaga agatgtgaag aggcttctga aactacacaa ggaccggttc cgaggtgacc 420 tgcggtggat cctcttctgt gcagacctgc cgtccctcat ccaagaaggc cctcaatgcg 480 ggctggtggc cttgtggatg gcaggtactc tcctgtcgcc ccccagtggc gtccccctgg 540 agagactcat acgggtggcc acggaaagag gctacacggc ccagggagag atgttctcag 600 tggccgatat gggcaggctg gcccaggagg tgctgggctg ccaggccaag ctgctctctg 660 gtggcctggg cggtcccaac agagacctcg tcctgcagca cctggtcact ggacatcccc 720 tgctcatccc ctacgacgag gacttcaacc atgagccgtg tcagaggaag ggccacaagg 780 cacactgggc ggggtcctgc tgggtgttcg ggctgtgccc agtctcggct acactgagga 840 ccctgagctg ccgggcctgt tccacccagt gctgggcacg ccctgccaac caccatccct

gccagaggag	ggctccccgg	gagctgtcta	cctgctgtcc	aagcagggca	agagttggca	900
ctatcagctg	tgggactacg	accaggtccg	ggagagcaac	ctgcagctga	cggacttctc	960
gccctcacgg	gccactgacg	gccgggtttt	taaagcccat	ctgggagcag	ttacctgtgc	1020
cagcccctct	acctgtgtta	gcagatctgg	caaccctgta	aggggggtgc	tagatggacc	1080
cgat t tgaca	gatggcaaga	ctgaggcctg	gagaagtgga	atcactggcc	tgaggtcaca	1140
tgactagcac	atggcaagat	ggagtctcgt	tctgtcgtcc	aggctggagt	gcggtggcgt	1200
gatctcagct	cactccagcc	tccacttccc	aggttcaagt	gattctcctg	cctcagcccc	1260
ccaagtaact	gggattacag	gcatgcacca	ccatgcctgg	ctaattttt	gtatttttag	1320
tagagacggg	gctttgccat	gttggccagg	ctggtctcga	actcctgacc	ttgagtaatc	1380
cacccgcctc	ggcctcccaa	agtgctggga	ttacaggtgt	gagccactga	gcccggccac	1440
agtgcagtat	ttctaaccag	tgatcagggt	aaagaggatg	cgtgtccacc	atcccagccc	1500
tgatcagcct	gtctgtgcat	ccccatccc	agccagggct	tggagcagcc	ttgctcacca	1560
ctgtgtcccc	tgcattgtaa	cacatccagg	cacaagaata	gccgcccagt	gactgccaag	1620
tgagtgaacc	agcctgcttg	gagcctgcct	ctttcccaaa	ctgctcatta	tcctgttacc	1680
ccacccagcc	cacgtgtcca	aatacactcc	agatgcaaaa	taaaaagctc	tacgac	1736

<211> 1919

<212> DNA

<213> Homo sapiens

gacagcgcgt	agtcgcagag	tcagggaggg	gacctcacca	cctgtctcct	ccctgaggtc	60
ttagaacaga	tacaagaaat	tccaggcgaa	ggtcccacag	agtttggatc	acgatgaggc	120
cagtgagtcg	gagatgagaa	agacctcaaa	ctcctgcatc	atggaaaatg	ggcaccagcc	180
ggggacaggt	ccaggcgatg	gacccctga	gattgcccaa	aacttctcag	caccagatcc	240
ccccaggcct	cgtcctgtga	gcctctcctt	gcggctgccc	caccagccag	tcacggccat	300
cacccgagtc	tctgacaggt	tctctgggga	gacctcagct	gcggctctat	cacccatgtc	360

420 tgctgccacc ctggggggcc tcaacccaag ccccagcgag gtcatcacgc cctggactcc 480 cagtcctagc gagaagaatt cctctttcac gtggtctgtg ccaagctctg gctacggggc 540 agtgacagca agcaaacaca gcaatagccc accgctggtg acaccacccc agtcgcccgt 600 gtccccgcag ccgccagcca taactcaggt ccatcggcag ggggagcgtc gcagggagct 660 ggtgaggtcg cagacgctgc cccgcacctc ggaggcgcag gcccggaaag cattgtttga 720 gaagtgggag caggaaacgg cggccggcaa ggggaaaggc gaggcccggg ccaggctgaa 780 gcggtcgcag agcttcggcg tggccagcgc cagcagcatc aagcagatcc tgctcgagtg 840 gtgccgcagc aagacgctgg gctaccagca cgtggacctg cagaacttct cctccagctg 900 gagcgacggc atggccttct gcgccctggt acactccttc ttccccgatg cctttgacta 960 caactccctg agccccacgc agaggcagaa gaacttcgag ctggctttca ccatggccga 1020 gaatctggcc aactgtgagc gcctcatcga agtggaggac atgatggtga tgggccgcaa 1080 gccggacccc atgtgtgtct tcacctacgt ccagtcgctg tacaaccacc tgcgtcgctt 1140 cgagtaaagc ccctgagcct ggattgccaa agagcagccc caggaagagg ccgggggtcc 1200 gcttgcgatt ccccagccag gatgccccca ggagccttgc cgtttggtgt gagcgcgctg 1260 tttgttctgt ggcatgtgac ggcactcccc ttcgagccca gctgtgttac tgattaaaag 1320 tactgctgag ctgtggtccg acagcactga tcacagccaa gggcttggag gaaaaggaaa aattatgaga gagagagaga cattggtgct aagtaatgat cttcctaaag aaatgcttgt 1380 1440 gtttataget tecagaatge taatetacaa tttteeetet ggtgaatteg atacategge tttacagggt tacagtgatt accaagtgtt tttttttatc aaaataccca gagttttta 1500 1560 cttcctcacg cgattgtagg ttcctctct ccctcctct gggccactgc caggaaacag 1620 agagaccgct taatcagcag cttgacaaag aagacctcaa gtcttgggaa gaaacagttt 1680 aatcactccc aagtcctggg caacagatga ccttcaagtc acctccgctc tccggggaga tgggaagget eteetetegg teceaaagte eteetgttet teeeaggagg eeteacaagt 1740 1800 gtttggctaa gcacaggctc tcgggaattt aacacttttg gggaaggaat aggccctttg 1860 tgctgagaga gagtttttat tcacatcttt tttaggggat ttgctgcaga tatttataaa 1919 aagtaactcc ctctgtacca ctgacccatt tatacataaa aaagatgtgt tgaattttg

<211> 1851

<212> DNA

<213> Homo sapiens

60	cttgcattat	tgctgaagct	gagctctccg	gggctgcagg	tccctgcctg	agagtcgtgc
120	gggaggagga	ggggtgggtg	ttggggagtg	gccctggatt	ggcgaagagg	tttagggtgg
180	aggaccagga	actatgggga	tcggtgagag	tgtgggggag	gcaaggactc	cccgaggggg
240	tgtctggcag	gagaaactcc	ggctctggtg	ctggaaatgt	gctgctcgca	gctgctggaa
300	tgctaagcat	ctgtctaatc	acccctgccc	gtggatccgg	atcctgggcg	gaaaggaggg
360	tacaccacgc	tacactgctt	cagttcgggt	actgcacaga	cccaatgtga	ctggcgaggc
420	catcaacaaa	cagtatgagg	caaactactt	acatagttct	ggacataagg	agccttaaat
480	gagatgtgga	gcctggaaag	tcacctggct	attttcctat	aacaaagggt	tgtagcagac
540	aacagaacaa	agggtcaatg	atcacattcc	atcatggacc	attcttattc	aattgtgaag
600	tagttgctgt	cactcagaag	tcaatatgga	actgtgcagc	actgccctac	tgaaaatgaa
660	cacctttgga	aagctggaaa	tagaaatagc	acccgacaat	gagctcactg	tctcctagaa
720	cacatcctaa	atcatcagtg	ggtaaaaatg	ggcttagagt	ctctacggac	cttggcggca
780	gcaatggcca	cttgctgcgc	gccacttcac	gcaagcacac	tgcaacactc	cttaatgagc
840	aaacagaaaa	gtgagctgtc	aggaatggat	tgctggaggc	gtgcaggtgc	caaagcagtc
900	gagttctgtt	gatgttgtac	tggaaaggtg	cagctttgtt	cttcatgaag	ggggagtgca
960	ctgtacagga	cccgaagagc	atctacagtc	gcgtgggaag	tatttagaag	agaaacagag
1020	aaaagaccaa	tctccttccc	tcctgttgag	acatttcatc	caagaaacac	agatgcaaca
1080	tctgtcaaga	gaaataaaac	actcttggat	aattatcaaa	gtcactggag	aagtgaaacc
1140	tagataattt	gaccactact	cacaatatca	acttgtgcca	tcgtttgaag	aaaggattat
1200	gaacctcatc	cagagtgtaa	aaatggaagc	aacttgggaa	tcagaggaag	gagcaagat t
1260	atacgtgtgg	gatgatgaaa	agaagaggat	gagaagtgga	ttgtcaccag	tacaatcaat
1320	ttggcttccc	tgtaggaacc	gtgtaatgga	cattaactcc	ctttgggaag	gccatcagga
1380	ttgtaccatc	actatggaaa	gagaaattac	acccaaagaa	caggagtcct	cacgcttgcc
1440	tcatggacac	ctgtgtgatc	tgagaacttt	cttcagaaaa	gatacatttc	tgcttctctg

agctgttaca aagaaacctt gctccttaga aattgcaagg gcaccttccc caagaactga 1500 taatgcctct gaggtagcag ttactactcc aggaactagt aaccatagaa acagctcaac 1560 aggcccaaca cctgattgtt cacctccatc ccctgatact gccctcaaaa atattgtaaa 1620 agtcattcga ccccagccta aacagcgaac atccattgtg tcttctctgg attttcaccg 1680 aatgaatcac aaccaagaat attttgaaac caacacatct acagggtgca caagctttac 1740 tgccagtcct cctgctagtc cacccacctc ttctgtggga accacagaag tcaagaatga 1800 gggaactaac catacagatg acctctcccg acaggatgac aatgatccc c

<210> 61

<211> 2619

<212> DNA

<213> Homo sapiens

<400> 61

60 tttgcatata atttcggcgg ctttgtgact cttccctgcc catctcccct gccaaccctg 120 acgaagaacc tctgctcctc ggctctggtt gggcttcctg aggctgtgga aagaacaggg 180 cactagagtc agacagagca agcatggctt agaatcccag cttctccact aagaagctgt 240 gtgaccctaa acaagttata taaccttggt ttcctcatct ataaaatggg aattataaca 300 tccacctgct gtggaaatta atgagtaatg catataaaat gtctggccca ctagaaatgc 360 tcaacaatat tagtttaatg aatgcttagt ctcgactgcc aggagtgaac ttgaggacat 420 ttcatgagcc gttagggggt cagctccct cactgatgtc cagcacctgg cccagggtca 480 gctacacagt gggtgcacat cttcagtggg gtgggtcccc ctctcccaaa aggtggccac 540 ctctggctgg gagctggcag gaccettctc agccagcagg gggcagagtc ggtccactgg 600 accetggeeg eeggeteagg etecetgtgg eeagatgeea geeettttee etgeaaetgg agagatgtga ggagcagagg actagggcag ggactgttgt ccccagagca ctggtcctgt 660 720 ctgggtgtca aggctcttcc cacagctgac agagcctgtg attggagctg ggaggataag 780 gctccctgga gcccttcctg tcattttgtt cctaagcctc ttaaccctac actgggaact 840 cctagatagg caggcaagca ctcagcaaca attggcttag gggatgaatg gggagatgga

900 ggcacagagg cagagcccag attecetete aggtetecag tteectagae caggeetete 960 cccaaaggcc ccaggtcagc agtgtggtaa gcagggatct aaaggcaggg cgtcctgcgg 1020 tctgggccac gtgtgtggga ggacgctgcc ttttcctcag actctccttt cagggagtgt 1080 gcgggtccct gctctggttt gagagggaac caactactcc tctggtctgt gcggcacctc 1140 ctgtcttggg gcccataccc ctagagtgcc ctgggcatgg ggacccgcac ccactttgaa 1200 cctggtattt ctggccaggt ccgtgggcca catccacagg cgagtcactg accacctggg 1260 tgtcgtctac tatgtgggag acactttctc cgaagagtac acaggctcca gcctcaaaac 1320 agtcgagcgg aatgtggaag atgattatat cgccaacctc cggaacaact gctggaagga 1380 gaagcagcag aaggaaggct tgctgtaccg ggcacgctac tttggcgaca cagatatgta 1440 ccacagagca cagaagatgg gcaccccag ctgcagccga ctgtcagagg tgcaggcctc 1500 cctgcatgga tagtcctggg ccagccacac caccgaggtc caagtatgag ccagggctgc 1560 ctccacctg caactcctgg cagctttggc cctggtcatg agcagaggag ggagggggag 1620 aaagggagga agcctggtga ttgtggcaaa gactcctgtc cccagcctga cctccagcct 1680 ccagagaccg agcagctgtg gggcctgctg ggaaaccaag gtcggtttcc gccctctagc 1740 gatgctgtcc tccccactcc tccgctctgc tccctggctc caggggtgtg ggggacccca gaaccaggca gagtgggaac ttgaaactgt tgctgagggc cacccggggc ttcttggtcc 1800 actccagcca tcagtcagca cggccctttc tccagcacag cagactattg tccgtgccct 1860 1920 ggtatttagg ccatcacata tggtggggcc caagagagcc ccatatgcac actgcctgcc 1980 tgataccagg aagaaccatg tgggaatagg tgggccaaga gccctccct ttctccatcc 2040 ctccagctag gaggaaatgg agcaagatga acaggcagcc acgaggtggg tgggagctgg cagtcttggt ggcggcaggg gccgcgggcc ctgaccaccc ccctctggtg ggatctgagg 2100 2160 cacteteteg aatgeegtea cacetggeag cetggaagee acaggeatee ggeettgeee 2220 aggcatctcg cctgcggtct gaggaaggga acagaaggtc atgagttcag ccaagcccgg 2280 agaagtgtgg gcagaagcag tgaaggttct tctctgtgtg ggtgccctgc ccacccctc 2340 ctttgcctgt gtcctcccgg cctggatcca tggctgactc tgcctggagg ccatttgtgc 2400 ctgcctctgt gctgccgcag gagggcaggc cgcaagtggg gttggtgggg gtcgagcggg 2460 cagcacggtg cagcggtgca gtggcaaggg gggctacttg tgtggcataa gctagaggag 2520 ccggtgccgc ctgaatgccg agctaactgt tgccactctc ctccccagac tatgaaatcc 2580 ctggagaatt tttggtgaca tgcactgagc caaggtgatg gactgtatat ttgaggaaag

acaaacaaag aaacaaaatt aaaatggaat tggaggccg

2619

<210> 62

<211> 3345

<212> DNA

<213> Homo sapiens

<400> 62

60 tttcgtattc tggagacagt gttttcctga gtgtcaaact ttttggaagg cccccaagag 120 gcctggcctg gggcccgtgg ctggccagcc gggcagccaa agctccaccc gggttctcag 180 cgagactctg ctactgaccg gctgagactg ggcaggccct gtctctccta agccctgtct 240 ctctgtgggc agggccgagg ggttggaggc tcttgctgat ttggagctga tgttcacatt 300 cctggcactt cctgggcacc ccttagtgcc cagcccactg ctgtgcaggg ctttgcatgc 360 atcetteatg acacaccea accacceaag aggeaagtae tgteaccee gattttacag 420 cccaggaaac aggcccaggg aagctgacag gactagaatc cagggtggct tcaaggagag gcaccatagg gactccccct ggtgccggga cacaaccagg cctcttggtg caggggagcc 480 540 aaggcetegg gggaetgggt gegtgetgag etggteacag etetecagee etgaceeggg ccaccccact gacctagaac ctgccacccc tcagggctgt ggagatgggg actgtgctgc 600 660 aggattetga eggagtggag geagggeage etceegeet gaatgetggt geaggggace 720 tgggggctgc tggcagccca cccagtgaca ggaggcccaa ggtgggaggg gcagggtgtc. 780 agtggccaag tttggggatc agggcctggt cagcctggaa gtgtgggaaa gaggctctgc 840 agetgecagg geeteaceaa cetteeetee etgggtgtgt gaggggtget eeetgagget 900 ctgccgagac tcagataccc cgagaagtca tgtgtgtgtg gtggccatga ggagtttgtg 960 gatcctgagt ccagtgaaag gaagttgggg cccagtaggc gcaggaaggc caggaagctg 1020 tcttctggag gtctctttgg ggctggcctt agatactctc acagatcctg cgggtgggga 1080 gtcagcccag tagcctttcc caagccaaac caggaatcct ttattcctat tccgtcctcc atatgtccca agaggcagca ctgccagccc cgttcacagc cagggaagct gaggctgtgg 1140 1200 cagatggggc aagataactc aggaaatcca ggcagcggaa gacaagcctg ccgtggcctt

1260 1320 gcctggggtg ggctggggag ggccgtcgtg agggaaagga gacagagggc gaacaaccca 1380 aggagaatgt aaggctgggt ggggctcaga ggatggggca ggaatgagat gcaccctggg 1440 ggtcccagag tggcatagag aggtcctccc agagtagggt ggggggactg ggctccccag 1500 ggaaggaggc tggagatgtc tgcccctcc ctcctagctt tcattggtgc ccattggaca 1560 ggtcctggct ctggggaagg gcagggcagg gctgggcagg agcttgtgcc catggaaagc 1620 tccctggaga tgccacaccc tgcgggggac ctgccctaca gaaggggaca tggcccatgc 1680 cctgcagggc ttgggtccaa ctggctgacc tgagccacgt cctccccact cctcaaccac 1740 ccctgagact ccatgggcac tggtgcctgc cggcactgac ccaagatgcc tctgcccatc 1800 ttgggaagga caagttgaga cccgtgggtg tagagaccct gccaactgca ggtgggacca 1860 gtgcccctat ccccagggg ctccagacct ctcctggcag ggctccaggc ccacctgcag 1920 ccatctgggc caggccaaca tcacctccag gcctctcctg gctgctccct ccccttccct 1980 2040 ctcagtcatc catcgcctcc tgcagcttct cctcccaacc ccaactcctt cctgctcccc 2100 caggcagtgg tgcccacact accaggcaag gtttgagccc agggacacca gggaagtgct 2160 tggtcctcag tgtggtgggg aggtgagggt gagtccttaa atggcctaaa ttgaggctaa 2220 aaatctctta gactggggta gcatgcaggt gcctccccat agacacacct gcgcacctgt 2280 gctgcccact gccacacaga acaaatctct tggcccatgg caggaagggg gcgtgcacta ttcccagcag gtgcacttgt actaggccag gtgtccgctt tagctgtcgg cagcaactca 2340 2400 cccagtggcc aaagcaggga tggggcaact ttgcaaaatg ctcatcccca agtggagagc 2460 tgggtcccca gagcccaaac ccacctgct cctccccaga cttgggcacc tttctttacc 2520 atgcacagct ctgagcagcc atgcagacaa acctggaggg cctcagtgct gagttcttgt 2580 gaggggctct gccttgggcc ctggcgtcac tgtggggcgg gaacaggaag ggcccctgct aacatcaagg gggttgtctc aatgtccatg cagggctgtc tcatagcagt gtccgagttc 2640 2700 cccactgggt cctgcagggc tctgtgggaa cacacattat tctgaagccc acaccacagg 2760 cttacaccca gcaggaccag ccaggccagg aggctctggc ctctgcattc ctatagccct 2820 gagccgtgtg tggcagcact aatctccatt ctgctgagat ttctgggaga ccccagcaaa 2880 tccctgagcg tctagtccca tgtcctgatc tgcaagccgg gcatgcaaaa cacagggaga 2940 tgcacacgaa gctttcacag gagtcctggt gctgaggttt tgcatttttt gttcagtttc

attgccagca	gcagcccctg	tgtcccactg	agtacttctg	gaggggtcca	gccaccttat	3000
gccccacac	tctccagcct	gcggggcctg	gcccttggca	catccaggcc	accaacctca	3060
aaaatcaaat	cagtgagatg	ggtcgggcga	ggtggctcac	acctgtaatc	ccagaacttt	3120
gggaggccga	ggcgggcgga	tcacgaggtc	aggagatcca	gaccatccat	ggtgaaaccc	3180
catctctact	aaaaatacaa	aaattagctg	ggcgtggtgg	cacgcgcctg	tagtcccagc	3240
tacttgggag	gctgaggcag	gggaatcgct	tgaacccggg	aggcggaggt	tgcagtgaac	3300
tgacatcacg	ccactgcatt	ccagcctggg	caacagagcc	gtctc		3345

<211> 1916

<212> DNA

<213> Homo sapiens

tgtg tcctggggcg gtate	ctgcc 60
gagg aacctgggtg gctgg	ggccc 120
gete cacagegeag atect	gtcgg 180
agcg cgtcaacacc ctta	gcact 240
gggc accctggggg cacag	cccac 300
accc gcatcctgtc caagg	tgggg 360
gcctg gggagcgcca tgcco	tcctg 420
gaccg acgaggtgga cgagg	gcaag 480
gaagg ccatcaccga gatc	acctg 540
gtttg tggacaactt cttc	agagc 600
aagt acttcttcga cttc	tggac 660
cacca tecacatetg gaaga	cgaac 720
gaacc cccacttcat ctttg	acgtg 780
atcg cgcagacctt catg	atgcc 840

tgcacgcgca	cggagcataa	gctgagccgc	gattctccca	gcaacaagct	gctgtacgcc	900
aaggagatct	ccacctacaa	gaagatggtg	gaggattact	acaaggggat	ccggcagatg	960
gtgcaggtca	gcgaccagga	catgaacaca	cacctggcag	agatttcccg	ggcgcacacg	1020
gactccttga	acaccctcgt	ggcactccac	cagctctacc	aatacacgca	gaagtactat	1080
gacgagatca	tcaatgcctt	ggaggaggat	cctgccgccc	agaagatgca	gctggccttc	1140
cgcctgcagc	agattgccgc	tgcactggag	aacaaggtca	ctgacctctg	acctacaatc	1200
tccagtgctg	ccttgggaca	taggtacctg	aggtacctga	gagcccctca	ggggaggagg	1260
ccgagtggct	gtggctgagg	cccccaccct	ccctggaac	gcgccccaag	ccggagtggg	1320
tgcagccgga	acccgcccag	cgtctagact	gtagcatctt	cctctgagca	ataccgccgg	1380
gcaccgcacc	agcaccagcc	ccagccccag	ctcctccgg	ccgcagaacc	agcatcgggt	1440
gttcactgtc	gagtctcgag	tgatttgaaa	acgtgcctta	cgctgccacg	ctgggggcag	1500
ctggcctccg	cctccgccca	cgcaccagca	gccgcctcca	tgccctaggt	tgggcccctg	1560
ggggatctga	gggcctgtgg	ccccagggc	aagttcccag	atcctatgtc	tgtctgtcca	1620
ccacgagatg	gggggaggag	aaaaagcggt	acgatgcctt	cctgacctca	ccggcctccc	1680
caagggtgcc	ggcactctgg	gtggactcac	ggctgctggg	cccacgtca	aaggtcaagt	1740
gagacgtagg	tcaagtccta	cgtcggggcc	cagacatcct	ggggtcctgg	tctgtcagac	1800
aggctgccct	agagccccac	ccagtccggg	gggactggga	gcagttccaa	gaccacccca	1860
cccctttttg	taaatcttgt	tcattgtaaa	tcaaatacag	cgtctttttc	actctg	1916

<211> 1919

<212> DNA

<213> Homo sapiens

<400> 64

gatcctcgat cggccttctg ctggctcaga cggcgaaaca gagatgcagg aaataagtga 60 cgttgctcaa gaaaaacctg acgcagtgaa tcatgctgaa tattaatatt ggatgcactg 120 tgcttggcag acttgaagac ttcatctcac atggaccagt ggacagtcag agtgtggttg 180

240 gtcccctcgt gaaaacatgg gtcctggctc tgctttgcag ctctttactg aatggaggca 300 gtgagagtgg gttgagcctc tgtggccgtg tgctcacatg cttcaagcag cctgcaacag 360 gaaagaatta gggcacagct gaaatccaaa ggggagaaga agcaggctga aatccacagg 420 gagcaatgtc tatttcttag tctgtctcct gccccaaata gcccctctct cctttcccag 480 cttgtgttga tgcgtgtctt tccctggcag cagatgtcac cgggacgtaa actaggacgc 540 600 gcctggagtt cagagtacag accccaagcg accgcctgct caccaggacg tgccagcagg 660 gtccttctcc cgagagccac agcgagtgag gggacactct gtctatcctg ggagtgggct 720 ggggtcctgt tcctgagctg gtgggcagat gcgatagtgc caggtagagc tgcagccatt 780 ctgtccatcc ctaccctgtc cacccgtttc attccctccc actgtggccc tgctgagccc 840 teteagggae atecatttae eeteggggae ageeagggag eeatgettae etgetgttte 900 ccctgggaga gctttggggc cagtttcaaa cagacccaca gcgtccaaac cagggccccc 960 aacatgcact tgggatggca ggggtgtggg ggtagagtgt aagttactga tttaaaaatc 1020 tgatataaac ctgatttcag ttcccagtca actgaggcac agcaaggtaa gtccctgccc 1080 agegteacte cacttggaat geggagagee eggeetaaag gggaceeact geacateeea 1140 agecacgcgt ctgctcactg cagecetgge ccctcagtge caeecetege aggtgctgte tetetageat gggagetgat ggegeettte tgtgteecca caggttettt cagageaegg 1200 1260 cttcggcccc atcactaccg acatccggga gggacagact ttctactatg cggaagacta ccaccagcag tacctgagca agaaccccaa tggctactgc ggccttgggg gcaccggcgt 1320 1380 gtcctgccca gtgggtatta aaaaataatt gctccccaca tggtgggcct ttgaggttcc 1440 agtaaaaatg ctttcaacaa attgggcaat gcttgtgtga ttcacaatcg tggcatttaa 1500 agtgcacaaa gtacaaagga atttatacag attgggttta ccgaagtata atctatagga 1560 ggcgcgatgg caagttgata aaatgtgact tatctcctaa taagttatgg tgggagtgga 1620 gctgtgcggt ttcctgtgtc ttctggggtc tgagtgaaga tagcagggat gctgtgttca 1680 cccttcttgg tagaagctaa ggtgtgagct gggaggttgc tggacaggat gggggacccc 1740 agaagteett tatetgtget etetgeeege eagtgeetta eaatttgeaa aegtgtatag 1800 cctcagtgac tcattcgctg aaatccttcg ctttaccaaa tctagacata cataagggac 1860 tttctctccc ttttcagccc tctctgtgca gagaaaagat gtgagtccgc ttgatgaatt 1919 ctaatgcttt gcttagagct atgagaaatg tttgttttaa taaaaaccta cagtccaat

<211> 2510

<212> DNA

<213> Homo sapiens

<400> 65

60 ttatggtgaa gaccaccttt tcagatgtga catggctcac agtaagagca cttttcagtt 120 catgcacage aaaattcata agtgagagga ctcaagggee aggcatttgt gaaggettte -180cagggtaact accccttcc agcactggag taccagaata atgagaagct caaaagagaa 240 tgtggaaagg ccttcctttc tccatcacca gagtactcat ggcacaggga agccatgaag 300 aagagetgag tgagaagatg etgecacaca getetaacat cagataacac egggeaggee 360 atgataggga gaagcccttc aagagcagtg gctatgggaa gacatgaaga cttttgccct 420 cttcaaccac ctaagaaccc acactgaaga gagatcttta aatacttggt atgaagaaag 480 acceteaaga agaaategat tettatetat aaceaaaaaa tteacagtag agaaaaceee tgcatctaag gaatgtggga tggtcttcag tcacctctcc tatgtgagaa agctatataa 540 agtacctatg ggaaaaaggc attacaaatg cagtgaaaat gggaaagcct tcagctatag 600 gcacccctt ttaagaaaaa tcaccagaga attcacaaga gagttatggg caacaaatgt 660 720 gggaaagcca cagctcccag aatcttaggc ggcactgtat tactgctatt gcagaagcca 780 tctgtattag ttacctattg ctgtgtaaca aattactcaa aacctagtgg cttaaaacaa 840 tagtcactat ttcacagtct ctataggtca ggaactttgg tgcagctagc tgactcctct 900 ttagggtttc tcacaaggct aacatcaaga tgtcagctgg gggtgtatca tctgaaggct 960 tgactaggga aggetetget tecaageaaa eteatgtaat tggeageatt eagttttttg 1020 tgggctgctg gactgaggac ccgtctgttg gtctgagacc tcctccagtt ctctgccaca 1080 tgggcctctc caaaatggca gcttgtcaat caaagcttgc aagctgatca tgcagtggag 1140 aataccaaca agtcagtcat ttgtaaccta ataacagaag tgagatccca tcatctttgc 1200 taaatttagt tagaagcaag tcacttggtc cagcccacag tcaaggggag agcattacac 1260 aagagcatga ataccagagg gcagagatca ttggaagcca tgtccaaagc tgcctgccat

1320 actgtctcat ctctgccacc tggcaagatc tcatgatatg tatcagtctc cctcactgtg 1380 ctaagggaaa gcagactata ctcccttttc cattctctag agagaattac ataggctttg 1440 agtaccttca ttttctttcc cactgatggc tttagatttt ggtatgacaa ttcttgctaa 1500 gatctgagct ggtgtcttct ggagctttcc agaaaaggtt tcttggccgg gcacagtggc 1560 tcatgcctat aatcccagca ctttgggaag ctgaggcagg cagatcatga ggtcaggaga 1620 tegagaceat eetggetaac atggtgaaaa eecaeeteta etaaaaatae aaaaaattag 1680 ccaggtgtgg tggcgggtgc ctgtagtccc agctacttag gaggctgagg caggagaatg gtgtgaacct gggaggcagg gtgtgcagtg agccgagatc gtgccactgc actccagcct 1740 1800 gggcgacagt gtgagactcc atctaaaata gaagaaaagg tttctcttca tggacattgt ttgcatctac atgtgacact taggaatgat ctgtttagtc tcaatcactc actcctggat 1860 1920 ctgcctgtct ctctctgaga taacaaaggc cttaatgttt agccacctgc atcagagttg gtgaggtggt ttgaaacaat tcatcctaat ataaaaagaa cagcttttgt aagggggcac 1980 tgagtgtctc aaacagccgc atgggcagga agagtgctca gtccagtttt ggttgaattt 2040 2100 gtcttgttgc cctaaggcct cctatgaaag actgacaggc ttggactgaa tcttgtgatc 2160 tggacaccaa gggtcacctg tgggcccaga gctagctctg aagaatgggg tagtttcttt 2220 gagaacctcc acagcaaaag tttggtcctc tgttcccaat gcatgtccca ctttaccagc tacatccccc agtacctgcc catggctcat gactcatgaa atataaaact cagtaggcag 2280 2340 gcataactgg ttcagacctg ccagggctat gtgggaacta tcattggtac aaaaactcta agtgtggaga agactgtggt agacaagagg ggacatgtct gttctaaacg cacatcagaa 2400 2460 acttccaatg actatggcca agtgagataa gggtgtacag aacttctcag gacatgcaga 2510 cctatgtgtc actcataact gaaattcaaa taaatatttt gtggatttcc

<210> 66

<211> 2294

<212> DNA

<213> Homo sapiens

60 aatgtacaat taatgattat ccacaggcat gcaaaaggta agtattagtt gtgttatttt 120 tatttcactg aggatggaat tagcaaaagg ctttaaaatg acaggaaaat tagctaatac 180 agaaaacaag cataaaattc aaagctacag cctcatttga tttggctttt tcagaaatta 240 aaatgtgaac agctgcgtag cagaaatgtt ttaatatttt cagagttgaa agccactttc 300 cagcaaccac tgaagaaaga gtatctcatt atttttactt aaagcactac agaaagtggt 360 gttctgattt tattaatatt ttttaggcca ggcatggtgg cttatgcctg taatcccagc 420 actttgggcg gatcacttga gcccaggagt tcaagaccat cctggacaac atggcaaaac 480 cccgcctcta caaataatat aaaaattagc cgggcatggt ggcacgcatc tgtggtccca 540 gctactcagg aggctgaggc aggaggatca cctgagccct gggaggtcaa ggttgcagtg 600 agccatgatc atgccactgt gctccagcct aggggagtga gaccctgcct caaaaaaagaa 660 aaacatattt tttgatggtg ataatcaaga aaccaaaaat attgctttct taatgcacac 720 atgaggcagg aaatctttcc tgaagggcta cattgtacct gtgcctctca agtcaccaga 780 aggccaagct gcaggtcaaa actgcgggaa aagcactttc ttcctgttgg cagttccatt 840 ctattattat tttttaattg atcttcccac ttgtctgatt tttccttgga cagaacaggt 900 aataactgaa tatagaatcc agctgatagc ctcattggct tttaattgga aacccattat 960 actgtgtggc acaattagaa agtgagaata accccattct gaggccgagt gtgctcaggc 1020 tgaagagcca gcaggagtgc ccgctgtgcg tgcgtggtgt gcggtgtgtg cagcagtgtg 1080 tgcagtgtgc agcgtgcagc ggtatggcat gcaatgtgtg tgatgtatgc agtgtgcagc atggagetgg eccetgtgea eaceeetgea geettgtgga agaaggtage getggeteag 1140 1200 tcaaatgaga ggaagagttt tcataagccc ggctggtgtt taaaacgtgt tttggctttg 1260 ttcattttat ggtgttggtg ttggtattgg tggtcatgtg ctggcatgta agatttcttt 1320 tetettteee tettetetet gettetaeat tetgtteatt gaggetteea aetgaatatg 1380 agaggaacgg gagatatgag ggctcaagtc gcaatgtatc tgctgagcaa aaagatgaaa 1440 acaaagaagc aaagcctcga tccctacgct tcacctggag catgaaaacc actagttcaa 1500 tggatcccgg ggacatgatg cgggaaatcc gcaaagtgtt ggacgccaat aactgcgact 1560 atgagcagag ggagcgcttc ttgctcttct gcgtccacgg agatgggcac gcggagaacc 1620 tcgtgcagtg ggaaatggaa gtgtgcaagc tgccaagact gtctctgaac ggggtccggt 1680 ttaageggat ateggggaca tecatageet teaaaaatat tgetteeaaa attgeeaatg 1740 agctaaagct gtaacccagt gattatgatg taaattaagt agcaattaaa gtgttttcct

1800 gaacactgat ggaaatgtat agaataatat ttaggcaata acgtctgcat cttctaaatc 1860 atgaaattaa agtctgagga cgagagcacg cctgggagcg aaagctggcc ttttttctac 1920 gaatgcacta cattaaagat gtgcaaccta tgcgccccct gccctacttc cgttaccctg 1980 agagtcggcg tgtggcccca tctccatgtg cctcccgtct gggtgggtgt gagagtggac 2040 ggtatgtgtg tgaagtggtg tatatggaag catctcccta cactggcagc cagtcattac 2100 tagtacctct gcgggagatc atccggtgct aaaacattac agttgccaag gaggaaaata ctgaatgact gctaagaatt aaccttaaga ccagttcata gttaatacag gtttacagtt 2160 2220 catgcctgtg gttttgtgtt tgttgttttg tgttttttta gtgcaaaagg tttaaattta 2280 tagttgtgaa cattgcttgt gtgtgttttt ctaagtagat tcacaagata attaaaaatt 2294 cactttttct cagt

<210> 67

<211> 1972

<212> DNA

<213> Homo sapiens

<400> 67

60 atagccgggt attgagcggt ccgggtctct gctgctcaaa gtaaagaccg tttgagaagg 120 cggggagaga tcgaagaagc tgctttatct tacagtcacc caagggggag cgccttcttc 180 cttcccagag tggagtggca gtgggtccgg gattctggga tatgcacagg gtctgcgccc 240 tgcgccctgt ccgcgctgaa gctgaacttg tcattggttt gcaacagcat ggtgaagaag 300 tgtggtgtgg atggatggac gggcctctca ggcacatgaa atactcaaag cccagtatta 360 accaaacatg tttctctgtt ttgtctttga tctttgtgca gtgtgttggc ttttttcctt 420 taatgatgtc acttgtattt tatttttggt ttatttgtag actgtctccc tccttggcca 480 tggctttact tttatgtcca cccaaggaga gtttcaccag tttaggttta agaaattact 540 gacaagttaa caataataat ttcaaaattg aacagtaata acttaaaccg tgccttggac 600 atagtagate tecaacagtt tttettgaat gtggetaeet aatgtggaae aagattttte 660 ataattacat gttgctattt ttaatacctt ttgggaggtt ctttagtccc ccccgccctt

tctccctacg	ttgcacaaag	agactggtct	acaaggggtc	ctgttagttt	tctggttttg	720
tggggtcctg	gaatattgtt	tgggcttatt	gagagttaac	aaggatgtat	tttgtgagtt	780
tctccaaagt	cttatttaga	gtaatagtat	ttcaaagcaa	gaagtgtttt	agagagaaca	840
tcattctgcc	tcttgtttaa	caggtgagga	aactgaggaa	aaaccagctt	acctggctaa	900
tcaaccacaa	gtacagatag	ttccacaatg	actcaatgga	tattacttca	actttgttcc	960
ctcaagaaac	ttttgtgatt	aagcttgttg	atttgtggct	tgatggttta	caggaatggt	1020
catttttaat	atctaggacc	ctgcttgctt	gctcttgctt	gcttgcttac	tagactggct	1080
gcatagtcag	tcttccacgt	gtaaacaaca	gtgtgtgctt	tagtggataa	gagatgttga	1140
gtgctgagat	ttcaaggctc	agcactgagt	agacctagag	catttttatt	tatactaaat	1200
taatgccatg	gtaacataag	ttagacagca	agtgaatatg	gcatcaaatg	tacaaagttg	1260
agtatctctt	tactagtcaa	tgtataagga	atttatttac	ccaagcaatt	atcttaaaaa	1320
cagcattaca	agtggtatgc	gaaacatttc	cagaatttat	ttccacatct	gctctttcag	1380
tggcatcatc	cattcctgag	ctcaagaaaa	ggcctctgcc	aaccgccagt	aatcctgctt	1440
ttttagtaat	cctactattt	ttttttaact	ttaagttctg	ggatacatgt	gcagaacatg	1500
caggtttgtt	acataggtat	acatgtgcct	atgtatacct	atgtaacatg	gtggttacag	1560
taaacatggt	ggtttactgc	atctatcaac	ccgtcatcta	ggttttaagc	cctgcattca	1620
ttagatattt	gtcctaatgc	tctccctccc	ctttccccca	cgccccgaca	ggccccagta	1680
tgtgatatta	ccctccctgt	gtccatgtgt	tctcatcgtt	caactcccac	ttataagtga	1740
gaatatgcag	agtttggttt	tctgttgtgt	tactttgctt	agaatgatgg	ctcccagctt	1800
catccatgtc	cctgcaaatg	acatgaactc	attctttttt	atggctgcat	agtattccat	1860
ggtgtatatg	tgccacattg	tctttatcca	gtctatcatc	gatggcattt	gggttggttc	1920
caagtctttg	ctattgtaaa	tagcactgca	ataaacatac	atgtgcatgt	gt	1972

<210> 68

<211> 2617

<212> DNA

<213> Homo sapiens

catgatgggg	aggggggtgc	gatggggaag	ccgggcatgg	gagaggatgg	ctcatgccct	60
gaaagtccat	gagaggcctc	ctctccccac	atctgcagaa	accagcctgg	acaccaagtc	120
tgtgtcagaa	ggccacctca	agaggaacat	cgtggtgaag	accgtggaga	tgcgggatgg	180
agaggtaagg	agggatttgg	gcccagtcag	gctctggctg	gccccaggga	ttctcaaggc	240
caggccatgg	aggaaagcct	ggggctggca	catagaaggt	tcccagcaac	tcccagtagc	300
tccccaggga	attctggagg	agagcaagga	aactgaatgt	aattccgttt	cctcagtccc	360
tccataggct	gttctaaggg	gagccttggt	accaaagcca	ctagatggga	ccctaataca	420
cactctctct	ttctcaccct	caaactcggg	ggccttgctt	gccagggaga	gaaagagaat	480
taaagttagt	agctttcact	tccaactctg	gcagacacag	ttggggatgg	ggagggcttt	540
ccatttccag	cttggtaaaa	ggaaactacc	aggggaatgg	gaagagggga	tttggcgtat	600
ccgccacgcc	actccaacca	cagtgggagc	tcatcttact	ccagcagctt	accactcgcc	660
aggcatgacg	ctaaatgctt	tcccagtgtt	atctcaccac	cccctctgtc	caccacgcaa	720
ggcagctgtg	gttactatca	agaaaagtaa	gacctgggaa	gtcggggact	tcccaaggtt	780
acacagcctc	gtggtggtgg	acctggggtc	tgtgtgaact	cctaactgtt	gcactgtgca	840
cgttccctgt	ccctgcagg	tcattaagga	gtccaagcag	gagcacaagg	atgtgatgtg	900
aggcaggacc	cacctggtgg	cctctgcccc	gtctcatgag	gggcccgagc	agaagcagga	. 960
tagttgctcc	gcctctgctg	gcacatttcc	ccagacctga	gctccccacc	accccagctg	1020
ctccctccc	tcctctgtcc	ctaggtcagc	ttgctgccct	aggctccgtc	agtatcaggc	1080
ctgccagacg	gcacccaccc	agcacccagc	aactccaact	aacaagaaac	tcacccccaa	1140
ggggcagtct	ggaggggcat	ggccagcagc	ttgcgttaga	atgaggagga	aggagagaag	1200
gggaggaggg	cggggggcac	ctactacatc	gccctccaca	tccctgattc	ctgttgttat	1260
ggaaactgtt	gccagagatg	gaggttctct	cggagtatct	gggaactgtg	cctttgagtt	1320
tcctcaggct	gctggaggaa	aactgagact	cagacaggaa	agggaaggcc	ccacagacaa	1380
ggtagccctg	gccagaggct	tgttttgtct	tttggttttt	atgaggtggg	atatccctat	1440
gctgcctagg	ctgaccttga	actcctgggc	tcaagcagtc	tacccacctc	agcctcctgt	1500
gtagctggga	ttatagattg	gagccaccat	gcccagctca	gagggttgtt	ctcctagact	1560
gaccctgatc	agtctaagat	gggtggggac	gtcctgccac	ctggggcagt	cacctgccca	1620
gatcccagaa	ggacctcctg	agcgatgact	caagtgtctc	agtccacctg	agctgccatc	1680

cagggatgcc	atctgtgggc	acgctgtggg	caggtgggag	cttgattctc	agcacttggg	1740
ggatctgttg	tgtacgtgga	gagggatgag	gtgctgggag	ggatagaggg	gggctgcctg	1800
gccccagct	gtgggtacag	agaggtcaag	cccaggagga	ctgccccgtg	cagactggag	1860
gggacgctgg	tagagatgga	ggaggaggca	attgggatgg	cgctaggcat	acaagtaggg	1920
gttgtgggtg	accagttgca	cttggcctct	ggattgtggg	aattaaggaa	gtgactcatc	1980
ctcttgaaga	tgctgaaaca	ggagagaaag	gggatgtatc	catgggggca	gggcatgact	2040
ttgtcccatt	tctaaaggcc	tcttccttgc	tgtgtcatac	caggccgccc	cagcctctga	2100
gcccctggga	ctgctgcttc	ttaaccccag	taagccactg	ccacacgtct	gaccctctcc	2160
accccatagt	gaccggctgc	ttttccctaa	gccaagggcc	tcttgcggtc	ccttcttact	2220
cacacacaaa	atgtacccag	tattctaggt	agtgccctat	tttacaattg	taaaactgag	2280
gcacgagcaa	agtgaagaca	ctggctcata	ttcctgcagc	ctggaggccg	ggtgctcagg	2340
gctgacacgt	ccaccccagt	gcacccactc	tgctttgact	gagcagactg	gtgagcagac	2400
tggtgggatc	tgtgcccaga	gatgggactg	ggagggccca	cttcagggtt	ctcctctccc	2460
ctctaaggcc	gaagaagggt	ccttccctct	ccccaagact	tggtgtcctt	tccctccact	2520
ccttcctgcc	acctgctgct	gctgctgctg	ctaatcttca	gggcactgct	gctgccttta	2580
gtcgctgagg	aaaaataaag	acaaatgctg	cgccctt			2617

<211> 1826

<212> DNA

<213> Homo sapiens

tttacataac	aaaaaggtga	aaaaaaggaa	aaaaaaactt	ctttgccaca	aactgagccg	60
cagaaccccc	cttctcccc	cacccacctc	ccctgctccc	tcccttctct	gcgccggcct	120
agggctctgc	accaaagcca	taggatggag	gagcaggagc	tggtgtgccc	cggagaggtg	180
cggccagccc	tccatcagct	ccaggcacca	aatcttggtg	gcaaggaggg	caccccgctg	240
cccgttgccc	cagagctgtt	ctctggcagg	ggaggacagg	cattgggctt	catggtgcca	300

gggtgttcag	aggggctgag	aaatagaaca	gtgtgtgtag	gggcttcggg	cagggggttc	360
tggaacgtca	gatgaggtgc	agcccagggg	aggacagagg	tgttagtgcc	cccaactcct	420
gccagagccc	cagtccagcc	acagagtggc	tcagaaaggc	cattcctaga	gggctgcggc	480
cctcccttct	cccttgccca	tgccccaga	gctgcctgcc	gggcagggtg	gcaccattgc	540
aggagaggag	cttggcctcc	gggggtcagg	caggaggcgc	ctggctagcc	agtgctggct	600
ccactgggca	ggaagccctg	gaccccagg	tatgaggagg	gggtggtctt	agggttctgt	660
tccaggtctg	cccgccccc	ctcccagcca	tgccccaggc	agaacttgga	attcaggtgt	720
gcacctgcag	gctgaggggc	tctgtgagca	ggtgctgctc	acacagggag	ttcaggcgcc	780
agccaagccc	ctgtgctgct	gggataggcc	tgcttcactt	agggagcact	gcctcaagac	840
aggtaaagcc	ccctcgtttg	ccccacccc	catggggccg	ctcaggagag	aaactccctt	900
tcaccccttt	cccagggtgc	tctctcta	ggtggcatgc	cagcccccaa	acacaagtgg	960
cttttgggcc	caggtgggtc	agcctgctgc	ccctgcccca	tacccctcg	ggccattggg	1020
acccctgccc	ttcagatgtc	ctagggtcta	ggagtggggc	cagtcactgt	gggaagaggc	1080
caggggcttg	gccggagagg	cagcccaggg	caggacccag	tcctgagtcc	tggagcaggg	1140
ccagggaggc	gcccatcccg	ccccggccag	ccgccctctc	tgctgtttct	tctatttgtt	1200
cttcttttca	cccactggtt	gggccccctt	ctcccttccc	ccttcccctt	gtcccttctg	1260
caggccgttg	aggggggctg	tctgtctcag	tctgtctctg	ctcccactct	tgaggcactg	1320
gttaccgcaa	agtgagcagc	cagcaggggg	gcgaaggtcc	tgtgttggcc	actgcctcct	1380
ccagtgctgc	aggaggcggg	ctgaggcccc	acctggtggc	tttcacctga	cccagccctg	1440
agtcctctcc	aagcctctct	ccggcccctc	ccacctggcc	actgcctcct	ccagtgctgc	1500
gggaggcggg	ccagggcccc	acctggtggc	tttcacctga	cccagccctg	agtcctctcc	1560
aagcctctct	ccggcccctc	ccacctggcc	actgcctggc	attgggatcg	ccccaaaatg	1620
gacccggccc	ctcctgttat	ttgctgggaa	gcccagcgga	ggagagggtg	caggtccccc	1680
gctgagcctc	cagtctctgt	agactgggct	gccggccctt	cagcccccct	tggagcccct	1740
cccgccacag	ccgcaccttc	tgctcccggc	ccctcccttt	gtatttggag	acaatgtgtt	1800
gtaataaagc	ttaaagtgga	tgtttt				1826

<211> 2110

<212> DNA

<213> Homo sapiens

<400> 70

60 ttgaaacaca ttaaatattt ctttcagagc aaagtaaacc tttaaaaatgc tcccaatata 120 taaatgtgca tatgcagtac attttaacag aaaaatgttg attaggaagc tttcagaaga tttgtcccac cgttgcttta aatttcaatg gcttttgggg ttgcaagtgt tttttcgtta 180 240 cgtggatgaa tcctatagtg gtgctgagat tttagcgcac catcactcaa gcagcataca 300 ctgtacccaa tatgtagtct ttcatccctc accccctcc ccaaactccc caccccaagt 360 ccccaaagtt tatgaaatca ctgtgtcttt ttgtcctcat agtttagtgc ccacttagtg 420 aaaactatgg tatttggttt tccattcctg agttacttca ctgagaataa tggcctccag 480 ctccatccaa gctgctgcaa aagacatcat tttgttccct tttatggctg tgtagtattc 540 catggtgtat atacatcacg ttttctttat ctactcattg gtcgatgggc acttaaattg 600 gctccatgta tttgcaattg tgaactgtgc tgctgtaaac gtgtgtgcat gtgtcttttt 660 catatagtga cttcttttcc tttgaccaga cttcagatta tactacgagg ctacagttac 720 caaaacaggg tggcactggt ttaaaaatag gcacttagac caatggaaca aaacagaaat 780 aaagccaaat acttacagcc acccgatctt caacaaagca tataaaaaacg taaactgggg 840 aaaggactcc ctattcaata aatggtgctg gaaaaactgg atccctatct ctcaccttat 900 acaaaaatca actcaaatta agtttatgac ctgaaactaa aaattcaaaa tgaaaacatt 960 ggaaaaactt ctggacatca gcctaggcaa agaattctta ctaaggccct gaaagcaaat 1020 gcaacaaaaa tagaaataaa taaatgggac ctaattaaac taaaaagctt ctgcacagca 1080 aaagaaataa tcagcagagt aaacagacaa cccagagagt gggagaaaat actggcacat 1140 tatgcatcca ataaagaatg tatatccagg atctacaggg aactcagatc agcaagaaaa 1200 aaacaatcca tcgaaaagtg ggcaaaggat atgaacagac atttctcaga agatatacaa 1260 atggccaaaa aacatgaaac aatgctcaac accacccttg catttccaat cttattcaca 1320 cctagaatcc aggcattttc agccacatga agtacctact tgaatagagg ttcattggta 1380 tgctggcact gatggatttt cagctgctga tgtttcttaa aggtcttctt acagtcttca 1440 aaactgcact gttaaattgt aaaggctcgt tagtcttatg gaaagtcaaa acaaaatgaa

cagttcgtaa	cagaatcctc	aagataaaac	aattttggag	actgtataaa	atttctgctt	1500
tcacccattt	tgttactgta	aaattctgct	ttatctcaaa	aaggtttgaa	gaatcatata	1560
acatttgaaa	aagcaaaact	gtttcagttg	gaatagtctc	ccaatacact	aatttgcaca	1620
atgtctgctt	ccaaattaaa	acctttatca	ttatgatggc	attaagtaaa	ttcagacatt	1680
tggcagacaa	aatttggttg	acgaaaactt	tatttttcac	ctttattttt	tagagacagg	1740
gtctctgtta	ccccaaaatt	ttttgttttg	ttttctgttt	ttgtttttt	ttttcagaga	1800
cagcatttca	ctatgtttcc	caggctggtc	tcaaattcct	ggcctcaagc	tacgattata	1860
ggcttgagcc	accgcacctg	gctgaaaatg	tcagaaacat	aggcagtaag	tgtaaaaata	1920
ctcaaaaaaat	ttaagcatat	aaaatcatac	ttactatata	ttgtttttgt	tgattttcat	1980
gtttgcgttc	aaaatgtttc	ttcaagtttg	attttgtgtt	gaattttga	tcacagccat	2040
tggctgcaca	actgtaagaa	gttatataaa	ccaaaatatt	aataaaccaa	gggagaagaa	2100
gttttaagac						2110

<211> 1686

<212> DNA

<213> Homo sapiens

taaagtgtta aagtteetta aeteeattea geeetgegee aggategtta getattgate	60
tgggcccctc cggcacttaa ctccagccag catattggca attcaattag caccagtcaa	a 120
tgctgcgtgt tcctggctcc tgctgcccat gccctcgccc ttgcccacca ctggctctgc	180
aaagcccgac gcccatgccc acctctggca gccccttgca ggctcttctc ctgtaccctc	240
tggatcaatg gtgcctggct ggctgttccc ggcctctgct ggtacaacct cagctgccta	a 300
agggtgactc taagcccagc cttagggctg aagacctcct aggagacagg aagaggctgg	g 360
gaagettgte aggggeetet teccateeet getgeetttg gateatgeee acageteeta	a 420
tctccttcca agaagccctg gcccagcaca aaacaggttc tctctccttc ctacccagct	480
ccagcctgcc accctccagc attaccagga cactagtcac tactcagaat cactgggtgg	g 540

ttcctcttca	ccctcttcct	gttctatgtc	atccacccag	caaagcccct	gcccttcttt	600
gcccctccac	tcaaggtagc	ctccacagtg	cctgacacgc	tcattctgtc	ttatcccttc	660
gcagcttctt	cccatttagt	ataggtggcc	tacaggccct	cttcgccttc	cttgtatctc	720
taactccgca	gccccctgc	tcccacatc	ctgctgccct	ccctgcccag	ctcttattct	780
ccagtccctt	cttcctcacc	gggagtccgg	agctgcccgt	ggctgaagct	caggatgctc	840
tgaagagctg	cgagtccttc	ctcagtggtt	gggccattct	gtagcagctg	cagacgcctc	900
tgggcctggg	catcgcggtg	ggcaggtgtg	cgcaggtgtt	gcagcacagc	caagcgggag	960
ggtgtctccc	acgcacacaa	caggcagtgg	tatagcccca	gctctgcccc	tgcctccgct	1020
ccctccatgt	ccagcagaaa	ctagaaccat	gggaagaggc	tggctcaggc	ccagaaggga	1080
catgccagac	ctcaggggac	ttttttttt	tttctagaga	gagtcttgcc	ctgttgccca	1140
ggctggagtg	cagtggcatg	atctctactc	actgaagcct	ctacctcctg	ggttcagtga	1200
ttctcatgcc	tcagcctccc	gagtagctgg	gattacaggc	atgcgcacca	cacctggcta	1260
atttttgtat	ttttagtaca	gatggggttt	caccatgttg	gccaggctgg	tctcgaactc	1320
ctgacttcaa	gtgatcctcc	cgcctcggcc	tcccaaagtg	ccgggactac	aggcgtgagc	1380
caccgcacct	agcctcaggg	gacttctttg	ccttccctaa	gggagactga	ctagcagcag	1440
cccctcccc	acccctcgct	tcctgctcct	gaaacccccc	ctttccctcc	tatggccacc	1500
taagtattat	tgcttgctct	ccccaaccct	ttctctttct	cctaccactc	ctggactccc	1560
tcccagcatg	caaatggagt	ctggttccat	cctcttgaac	ctctggtgac	atgacaaact	1620
gagctgatac	caccctccc	tccagggcca	aacaccagaa	gagctgaata	aagtctgttt	1680
cacttg						1686

<211> 3039

<212> DNA

<213> Homo sapiens

<400> 72

attgcatacc agagaacagt gtagatgctg ggcagtgcct agaagatgcg agatctgact 60

120 cgcggtcatg tctcagcatc taggtttatt gtgtgtcttg gatggcctct tgaagctctg 180 gacctcattg ttcctgtctg gaaatttctg aatatagaaa atataattca catgatgact 240 ttttttttt taagtgaaga tacgttgata tttgcgattg caagatttag aaatccaact 300 cagactggct taagcaaaga gggtgtttat tgttcatgtt cctgggaagc ttggacaggg 360 ctgggcccag gtgcgctcac atcctcccag cttggccagc aagtggagag ggggcttctc 420 cttcccagtg gctgccactg aagtcctggg gccaatgctt gtgggtactg tgggcctgac 480 540 atctatgcta cagtggctcc ctcagtaaaa aatgagatgc gtttatcaga agcaaggggc 600 agggatgctg ggccagcaga aatagcagat ttccccctag aaagtcacac tgtatttctg 660 ggtactcccc ttctctctca aggccatctt ctgccatcct attttgagat agacatgcgg 720 ctcttttctc ttccacatta tttcttctct agaagctcct ttcattgtcc ctagatccac 780 ggacttatcg acagatggac atggtgactc ttaaggaaag agatgctgac actctgcctc 840 tgcataccct gccaatccca ttttagtagt gaaattttga ctttaaaaga cggggaaaat 900 acaggagtaa aaaaggcatg tggtcacgag gcacagtttt gccatgaccc aatttggata 960 tggcattagt gtgtattgtt ttgttgttgt tgttgttatt ttttataaat gcagcaccca 1020 gaattcacac ctcctccaga tttaagctca gacaaggaag ttgtgtgaaa tgaatgtgca 1080 cccctaaccc atccactccc ttccccagtc tacagaggaa tttgctctgc ctcaggtccc 1140 aagtaatggg tgactcttct gcaaccaaga aatcacaggg cccctaaatt tgcagaaatt aaatactaaa aaaagaagga tatcatcgtc cctgtaggca aagaagcatt cactctgccc 1200 1260 aggaaggcag acttcctagg gtacgtgctt gttttttagc ttgcccttga gtctgaaagg 1320 acagttatct cttttggaat ttacttagag cagtaactta ataagcatat cctagggact 1380 gaatcettca aacteetcat gtaaaaatag ggetggacta etgtttttt geetatggaa 1440 aaagtaattg cccggactca ccttcaaagc ctactcattt gttgaaattc cagcaagggc 1500 atgaagtaaa gatgataggc ctttgaacct gccaggttag ctggggtttga gagggtacct 1560 gggagtttag agacccatct ttgccttttt ctttttcttt tggaagtctc tactgaaatg 1620 ggatgaaacc tggcctcatt tccagctcct ctttcaaaat tagagccagc cccaggcctg 1680 gcagtgtctt ggttggggca agccagggac tgactatcgg agagttgaga tctgaatccc 1740 agetetgece etgaacaget gtgtggetet gggcaagtaa ttgecetete tgeacttete 1800 cacctataga ggggacttcc taatgcctgg gcctcagatt gtcataagtg agaacatcaa

1860 cactgtagcg ttcagcatgt gacacaggag ctttctacga accctggcca aggtggaggg 1920 cagagtgagg cgctcgaaca gcaatttgag tgtggttgca tgacctccac ttgggcacca 1980 agcacgtttc tgtgggaccc gtttctctgt taatttctac agctagtaag tgagcttagt 2040 2100 tggtgggaag agaggggagaa gaaggatcag caggcccagg cgctgcagta gagagatgtt 2160 gtggggctgt caggttttca gatgggctta actgggataa ggaggagaat tagaggtgaa 2220 ttaggacaaa gcctctgaag agcaacttcc cgaaaacagt tctcaactca atctcctgct 2280 gggcagtaga agataataaa aaaacaaagg aagggctgcc cccagtactt agagcactta 2340 gcgcacacac tctcggtcgt tgtcaggggc tgtttgcttc ttgaaattct gctaaaaagc 2400 cagccaatta catgcaggct gtcccttata tcctaggtaa ccagccaggc atctttcccc 2460 ttagccttcc tttgaaggtc ttattcccct cttgccatct tttttcagtc tgtccttgct 2520 gtgatcgctg gaatatggaa cacagagggc aactgagaaa atccttgaat ttgtgaagtc 2580 aaagactatt gggaggccat gcctgccatt tccctgaaaa gcacttcatt taccaaatac 2640 taatcagatt cgaatggaca tcagcccggg cgagttgtta aattattgct gtaatttgaa 2700 aaatgagtgt gtcagagtat cagggaagct caagaatctg gccagagctg tcatttagag 2760 aggcagaagt ggacgtcctt gggtgctgag ggccctcagg actctcctgg cccacaccag tgcctcccca cataggcact agttggacaa caagtggaaa gatgtggcct tccctgctcc 2820 ctttttttt cctttttta aacttatggt aaaatacgta taacaaaatt taccatctga 2880 atcatttcta agtgcacatt tcagtagtgt taagtacatt cggctgggtg cggtggttca 2940 3000 cgcctgtaat cccagcactt tgggaggccg aggtgggcag atcacaaggt caggagatcg 3039 agaccctcct ggccaacaca gtgaaacccc gtctctact

<210> 73

<211> 1707

<212> DNA

<213> Homo sapiens

60 ttatatcaaa agtaatacag gtgaatttca ggaaatttgt aaaacacagc ttcaaagaga 120 gaggtggaga gagagagaga gagagaaatc tatcatctat cactcaccac tattaacatt 180 ttagtgtcat cttcccatgt ttttgtttat gcatagatat gcatatctat tttgcaaaga 240 taagaaatta ctatatcttt taaacgtttt tatttgataa tgtactatga atatttccca 300 ttcaattaaa tacctctaca gtgacactga atgcttatga tactgtattg atattaatat 360 tgtagaatac atcaggaaga tattattaca atatgtttaa ccaatcccct ggatgctaga 420 tatttgggtt tctaacattt catcttttta aataattctg tgatgaacac ctgttcgcag 480 ggtaccctcc atgaccagtt gtgtttcaga gaaggcagat ctagtccatt caaggccagg 540 atccccgga ggtcagtaca ttatttgccc agtgaattgt gggcatatct atactttttg 600 cacttttcca ggcaggaagg aggaagtagt actgagaacc cactgtcttg ggttaaggag 660 cattetetgg getgettagg ggagaagatt tetateecaa ggteetgeag eettggggta 720 agatgggagc agagaagaca gagtgtgggg ccactgtgga ggcagcaggg aggggttcct 780 tgtggccact gatcggagcc ctcatattcc ttgtggggag gctctaattt ctccagagat 840 gcttctctac ttggaggtct gccctgtgtc gggagcatta gtggccctgc agagaggtgg 900 gacattattt ggatactctt gctcgtaggg agtttgttgc ctcccaaaag gtgtgtggca 960 tttgtaagtt gttctccttt tccaaggttc ttcagaagac ttgaatatgg tttgtaatct 1020 aggcaccaaa attgaaattc cctccaaaga gccacacaaa taaatgacct cccataccat 1080 taagttetet etatgeatgg caateeetag ttaaceteag acaggtaaga agagagagtg 1140 tttttcatca atgacaagga aagttttttc tggctaatgt ggtatagtag caaatgcaac taaaaaggac accccaagc atgtctttaa ttcatttgta cacatccaac aacatcactt 1200 1260 ttaagtacac ataggtagga taaatattta gtcattaagt atctgaagtt attgtaattc tatttcagca ctattctttt ccctacatta aaaaaaaatt tctagactgt gcttcaacct 1320 1380 caaaggacat accttggaca gaatattcca ttaaagacat tgttggagca acttttatta 1440 ttcattagtg tgttttaaag tggacctgaa cagaaatgct ttttgctaaa gtaaaaatac 1500 atccgtttct atgatctaat tgtgcaattg gttagaattt ctatctatca gttcaaaggg aaacttggtt tcagtgaatt tgtttttaat aaaaatgtgc tatctatgat aaatatattt 1560 1620 cactttgttc aaatggattt gattgggaaa acacattgag cagaagtact ggtacagctt 1680 aatttcattg ctttgagaaa acgtattgaa tgctggtttg aattaaattc tatttgtttt 1707 aataaaagtg tattggcctg agtgtac

<211> 2587

<212> DNA

<213> Homo sapiens

<400> 74

60 atttattccc gcctgcccag tccctctcta ggcatggaca gtctaggcct ccacgctgat 120 cctcttactg caaaagaagc tgaagggaac acttcactcc aaggctcaag gggttacagc 180 tctccccaaa tttccccaat aggtttggag ttcaagagct attttatcat accagtaata 240 agagaatttg gggtctcaca tccccgccct ggggtcacac aggaattctc tttgaacaaa 300 agagaaaaag atacaagaaa ttatgctgtg tgaccctgaa aggtggtcgt agagcccctt 360 gaagggcagt agggactttt taggaggagc ataggcaaca aaaggaggagt gcagagcaag 420 caggegggta geatgettee tgteeetget ggteetgeea aaccetgege ttgeagactg 480 cacagccacc tttctcaacc aggacttcca ccatccacgc accaatggga atgccgctct 540 ggcccgcagg ggctcccttg agcactggcc aggtcttccc tcagccacaa tcccctccca 600 caatctgggc aactttagtt ctgccagcag ctgccttggc ctctccgttc ctcaccatac attacttttc attetetgee tgeeetgeee tecatateee eetgeeacea tecacacace 660 720 aatgggaatg ccgctctggc ccacagaggc tcctctccct cccagcatcc atgtgacgtg 780 tgtcataccg caccgtggca ggctggggaa ggggcacagg gtcaccctga aactgtggaa 840 tgcacctcct cccctgcaa tcccctcccc aacccagagg ggaaaatgaa ggtcaccctg 900 atttgactct ccatgtaaaa tggcattttc ttccataaca tcccatatca atgtgtcaat 960 tttctattaa ttttactggg gaagtgtctt ccccttgttt ctcactctgc ctcctctt 1020 gtgttattat gggcttgagg ggcaggggta gctattgctc atgactttta ctacaagata 1080 accagacttc ctaagccctc catattggga ccaatttctg ctgaatgcca ggtgatgaga 1140 ggtttcagcc cctggcgtgg gtggatgacg tcagaccagg gcagcagagg actctcattc 1200 cacaagetee etcaggactg ageaettget eegggtetee tgaageeeca tgtecatete 1260 cttgtctgcc ctgccagtct agcagacttg ggctgagaac cagacctttg cccttggccc

1320 agcctcacct tccccactgg gtctctagat ttctagattc cccatagggt atgccagcaa 1380 ggagaggata tgagggccca agcaaactca ggaaagtttc tatcaccaag ggcagaacac 1440 gaacatcttg aggctaaagg agctgcatgg ttgctaccaa caaaggagac cgacggtgtg 1500 cagttgattc ccatgttttt actgcacttc acccccaaat tcccagcaag gtctaaggct tcgccaggaa cccttgtctt cttgccaaag gcatctcagg gccatcctgc aatactcatg 1560 1620 aggttgcctg tcccttcatg cccctcaccc caccccagga ttaatcatca aagaaggact 1680 gtctacatgt cctcctcct gtgcttagga agagagacaa ataagagaat gagaaggctg ggaaggccct tagcggtcac atcaagcaac tgtccttgcc aaggttttat ggaggaggaa 1740 1800 actgaggccg ccttgtgctg agtggcttac ccgtgagcag ccggcactcc atagggccac 1860 agcagagact gtttcttcgt ggcgcggaag gacatctctg cttgctggtc ccacaggcta 1920 ggacagecee tattgacett gtactatage tgeatgtgae etttaaceaa tggtaaaata 1980 gccggatttg tttccacctc cttctgaggt tctgacctgt agtagagaaa agaaatagac aagcgtgggt gggccacatc ctgatcagct gccaaaatgc gtgtggccct tgttacccct 2040 2100 gtcctgccca cttggtggac cattgcagga agtctgagcc ctctgccttc ctttctcttt 2160 gcagggcgaa gatggcttac cagtccaagg ctgctggaac aagtgatgcc tctaaccttg gattggcctg tgtgtgttt tgtacataga atatttattt ttatacagtt ttcacttttt 2220 gaaaatgcca gaagtatgat gcatcttaca gattattaaa aaagaaagaa aaacttgcat 2280 2340 attttgtaca gaaaatatca acctcttccc ttttgtttac aagatgtttt gtataagcct 2400 atgtctctaa tacatttttt gtttggtcgt aatgtctgca tgatatttgt gcatatttat 2460 taagtatcga agcttaataa attattgtgt cctggtgcca aagggggcca gccagaactg 2520 aggtgctggc tggctcatgt gtgaattcac ataaatgtag aggtccatga tatttgctaa gctaggtgtg tctaagagta ttttaaaccc ttatggattt tcattattaa aggaaatgaa 2580 2587 acatggc

<210> 75

<211> 1623

<212> DNA

<213> Homo sapiens

(100)						
gctctcgccc	gggccggcca	tggcgctcaa	caatttcctt	ttcgctcagt	gcgcctgcta	60
cttcttggcc	ttcctgttca	gcttcgtggt	ggtggtcccg	ctgtccgaga	acggccacga	120
cttccgcggc	cgctgcctgc	tcttcaccga	gggcatgtgg	ctgagcgcca	acctcacggt	180
gcaggagcgc	gagcgcttca	cggtgcagga	gtggggcccg	ccggccgcct	gccgcttcag	240
cctgctcgcc	agcctcctgt	ctctgctgct	ggccgccgcg	cacgcctggc	gcacgctctt	300
cttcctatgc	aagggacacg	agggctcctt	cttctccgcc	ttcctgaacc	tcctggtcag	360
cgccttcgtg	gtcttcctgg	tcttcattgc	cagcaccatc	gtgagcgtgg	gcttcaccat	420
gtggtgcgac	accatcaccg	agaagggcac	cgtaccccac	agctgtgaag	agctccagga	480
catcgacttg	gagctgggcg	tggacaactc	cgccttctac	gatcagtttg	caattgccca	540
ggtagggggc	tctgggcaag	aagggaggct	tgcaatgctg	ggagggggcc	atttactgct	600
ggacatttgc	tgagctctcc	cccatccaga	ggaggaggca	ggctcctgtg	tggataaggt	660
agttagcaat	gggaccaggc	agtgggagca	gtcgggaagg	cttcctgcag	gaggtggggg	720
agagctgggc	ttttgtaggt	gggtttgggg	aggagatggc	cacagtgagt	tagaatcagg	780
aagtggcaag	gccctggggt	ctggggtggg	aagtgtgggg	gtgtgggggg	aggtggtgcc	840
agaaacgaaa	ccaggcatca	gatcctgggg	gtccagtgta	gggacaaggg	ctttggactt	900
tggtgctggc	gctgggtggg	cctgttcaga	tcagagctgg	aggcttagag	gagtccccta	960
gccaggggga	agctgataca	gagtccaagg	aaggaggcag	gggatcccac	ttgtgaattc	1020
agatttgcca	ccctgccctt	gtataagctg	cgtccccgc	cccctaggag	acttggtgga	1080
gggcgatggt	ggcccccact	ctgagggacg	ctatttgctg	aaatgcaggc	atgtggggac	1140
acatcagtgg	cccgtgaggg	ccggaggggg	aaccctggaa	ttgggtttgc	cccttgaaat	1200
ctgcagatgt	gccccagacg	gagatgaggc	agatgagggg	tgccgggtgg	gggtggctga	1260
gaccagacac	ctggctcctg	ccagcactga	tcagggcccg	ctggcttcag	gtccaattcc	1320
ggaccccagg	ctggcctctg	aaggctcttg	ctggccgtgg	ctggcctgag	gacgcttctc	1380
ctggccagga	gccctccaag	ggtgctggac	gtgggtgggc	ctgaatgctc	tttgccgaga	1440
tgaactggac	ctgtcaaaga	caccttcatg	caaatttagt	gagtggaaga	ggcctcaggc	1500
ctaatttgtg	ccagttggat	taaggtgtga	gtgcagtctg	atggcaaata	cgctcaaatg	1560
agaatcagct	taatgtagct	caggcctggt	tctgattaaa	ttgtttctcc	ttcaactgtt	1620

1623

<210> 76

<211> 1984

<212> DNA

<213> Homo sapiens

<400> 76

60 acteccecg eccegtagee atetggacet etgeagetag tttetgtett gggaggtece 120 ctgggctttc caccatggcc ctagctctgc tccagggcca gagcctgagt gggcacccag 180 cacagatgct gtgcttgggc gaggtgtggg caagtgtggc cactctacag gagggctgag 240 ccaaggccat gggaaacgtc tgttcaccgt actccaggtg cctatgcctc actctgggcg 300 egtgeecage teeetteeag eccegette eetgetgtte accecette tetggettat 360 ccacagactt gaaggctcca ttagggcaaa tccctccaga aagcctttcc cacccacagg 420 gcaccagge caggeccage tggageteet ggactgtget tcaggaggea gcacagcage 480 gcctctggga ccagcagtgt cagaccactg tcttcacctg ctcccctcac ggtgtcctga 540 tgtgtggctg gccccttgct gcccctgagc agtaacctgc aggggtttgt tcagggagca 600 gtggtcacca gagcgcccag tttctgacca cagcctctag aaatgtcact caggcccaac 660 gagctccatc tagagtcagg tataaatgtt gcccacatct gatgctttaa atgccagggg 720 ctcagtgctc ccaggaaatg ctggcttcct gccaggaagg caggcccgca gggtgaggca 780 ggcagggcag ctcccacagt gtggccagct acccattgtc tccaggcagc taccaggggc tcgtccacca ggaggcggc acctgctcag ggccctcagc agcatcaagg tctggatgcc 840 900 ggagctcagg aggggctggg gagagtggcg tctgtctttg ctcggccact gacacgcgag 960 ccagccgtct gggtgatggg atttttccct ggtgttgaga tgctaccctc ccctctactc 1020 aaggagagag aagagaatag gaggtgactt tgagtcctca cagcaatgca gtgaagtaga 1080 aaattggccc tattatccat attcagagga gaaacggagg cttggagaaa ttgggtggga 1140 acagcagtgc gtcctgatga ccctgttgag ttttctcgcc acagctatgg aattctgctg 1200 atttttgacc tggagagaaa atgccaccag gctatcaaag gagcagagga gactgaaatg

1260 ggtttcccat gatgaaagga agcttgtctg tctgtctcaa ccattaatcc tggcaaaggc 1320 ttaggctcct gctgagtccc cagtagggat aggagctcat gaatgcctga gccacatctg 1380 ccacctgttg gctaagtagg atctgcaaat ggcattctta tctcaaaatg aattggcatg 1440 attattcagt tctgttctcc aatctctgtg taaccagcac tgggcatctt atctgtaaaa 1500 catctgactt gactgtcagg cacactgagt gacagaggct gacctgtcgc gggggctcta 1560 gtatccccac cactacccac ttctctcaat tgagttacat ttgctgaacc tggtcccaaa 1620 ctgacagatt cccattgtac ttgttattgt aattacatca tttaatatga agtagactca 1680 tgaattacat gaattatgaa catgaaaagg tagggaattg attcatcgaa accctagaat 1740 gctttagaca gactcagtag aggcacgttg ctaaaaaaata ttgtcaaatt aagcatggat 1800 gagtgaaaca tgcaatagcg agaaatggga agaatctggg attctgctct cagaatactt 1860 caacagtgtc gtaaaacttg tgtttgactt taaagaaata ctggaaattg tgaatgtctc 1920 actaaaaaaa caaagagttg tcttatgtta aaagaataac aaatgaatgc acatgttctt 1980 taaagttaaa atacaatttt atgggtatgt gtgtgtgaga aacagaaata gaaagaaaag 1984 gaag

<210> 77

<211> 2234

<212> DNA

<213>. Homo sapiens

<400> 77

tgttttggtg actatggcct tatagcatag tttgaaatca ggtagtgta tgcctgcaga 60
tttgttcttt ttgcttagtc ttgctttgtc tatatgggct cttttttgtt tccatatgaa 120
ttttagaatt gtttttcta atgctgtgaa gaatgatggt ggtattttga tggagattgc 180
attgaatttg tagattgctt ttggcagtat ggtcattttt acaatattga ttctacccat 240
ttataggcat ggcatgtgtt tccatttgtt tgtgtcatct atgattctt tcagcagtgt 300
tttatagttt tccttgattt gattctccac ttggtcactg ttggtgtaca gaaaagctac 360
tgatttgtgt acattaatct tgtatccaga aactttgctg aattatttta tcagttctag 420

480 gagctttctg gaggagtcct taggattttc aaggtaaatg attatatcat tagtaaacag 540 ggacagtttg agttcctctt tactgatttg gatgcctttt atttatttct cttgtctgat 600 tgctctggct agatcttcca atactatgat gaagaggagt ggtgatatag tgacagtcct 660 tgtcttgttt ccattctcag agggaatgct ttcaactttt ccccattcag tattttgttg 720 actctgggtt tgtcatagat gtcttttact acattaaggt atgtcccttg tatgccaatt 780 ttgctggggg ttttaatcta aagcgatgct ggattttgtc aaatgctttt tctgcatcta 840 ttgagatgat catgtgattt ttgttttaaa ttctgtttat atggtgtatc acatttattg 900 agttgcatat ctttaaccac ccctgcatcc ctggtatgaa acccacttga ttgtggtgga 960 ttacctttta gatatgttgt tggattcagt tagctagtat tctgttaagg actttagcat 1020 ctatgttcat caaggatagt ggtctgtagt tttccttttt ggttatgttc tctcctggtt 1080 ttggtattag ggtgatgctg gcttcagaga atgaattagg gagggttcct tctctatata 1140 tcttgtggaa taatgtccac gggattggta ccagttcttc cttgaatgta tggtagaatt 1200 ctgctgtgaa tctgtttggt cctggacttt ttttatgttg gtaattttta aattatcatt 1260 taaatctcgc tgcttgttat tggtctcttc agggtatcta cttcttgctg attaagctag 1320 gtgtaagatt gtccccatgg cctgaaagct taaggagata tataactcct cgcttctcag 1380 gcccagtccc aaggcgcaag gccacttgcg tcagcagtgt gtgcggcagc atgcaccagc aagatagcag aggcagaaaa atagccagtc agaagacacc tacccctgaa gattgagaaa 1440 1500 gaggccatat gggtaaaaca tagcagttac gtcagactag gacacttcct gtttacagga 1560 gactgtaaaa catttgtccc atcctcactt ggtgctaacg ccattttaag cctcagcccg 1620 cctgcaccca ggcactcatt aagacagcat gttgctccac actgcctcgt gttgtctgtt 1680 ggtgcactct cggggttcaa actgttacaa gaaccttata ttttggtgct gaaatctggg aggggctcag gtctgcatcc cccatggacc tagccctcca ccccaaagag caggccacag 1740 cagctggaca aaggaaggtc ctcagcctcc agtcgcctct ctgtgcatgc agtcggtcac 1800 1860 tgatctcgcc tactggcaca gacgtgtttc cagacaatcc agatgatgct tctgctacag 1920 cgacatgaca ggaatgtaag attctcccgg ggcctgaaag cttaaggaga tgaataactc 1980 ctcccttctc aggcccagtc ccaaggcgca agggccactt gtgtcagcag tgtgcaccag 2040 cagcgtgcgc cggcaagata gcagaagcat gaaaagggcc ggccagaaga cacctactct 2100 ggctggaaga cacgtacccc tgaagatcaa gaaagaagct atctgggaac aatgtagcag 2160 ttacgtcaga ccaggacact tcctgtttac aggagactat aaaacctttg tcctatcatc

acttgatgtg gacgccattt taggcctcag cccgcctgca cccaggcact gattaaaaca 2220 gcatgttgct ccac 2234

<210> 78

<211> 2482

<212> DNA

<213> Homo sapiens

60	acagcaagct	atgctgggag	aactcactcc	caaaaccatg	catgcaaaat	ttaaaaatca
120	gaggagaaca	caagcgcagg	ggaaaggaca	gacgggcctt	acccaggacc	ttccaggaag
180	gggaggggg	tgatcggcag	agtgcgaagc	gagcgccctg	aggccctgca	cgctcgaccg
240	gtacctgggg	tcccagggca	acctgccacc	gacccccacc	gctgcacagg	ctcccgaacg
300	gtggaggctt	ctgtggagaa	tcgaaacaca	caagaacatc	gccccaagtc	accgaactca
360	ggcgggacaa	ctgggacaag	aatctttggg	gcctgcatgg	tacacaggga	gaggtcaccg
420	tacacacctg	cgctgccacg	caaccccgcc	gaagcagacc	gcgggtccag	ttccagacac
480	ccccacaatg	atccctgggc	caggagagcc	gcgtccccat	ctaccccaag	ctgccacctc
540	ggcgtgaggg	acaagccccc	gccactcggg	ccggcgaaac	cacattactg	caccagacag
600	gccggctgga	gcgcacccct	gacgccccgg	ctgagatggt	gccctgaaca	cagcagagta
660	caggctgtca	cgctgacttt	cgtcctggct	tgagacccct	ccctctttgc	aggctccatc
720	ctggcccggc	caagcagccg	gccttgagca	ggtgaccact	ggcacttgcc	ggctctgcgg
780	gcagagacac	acacaccctg	ttcctttaag	tgcccaggct	acagtccaca	cgacaatgcc
840	cacttgtgat	gccgcatggg	gaacgaggag	ggacccgtgg	cagcttgagg	cagcactgcc
900	caaatcccag	atgcagtgac	ggggcagcgc	catccatgag	gtccatgcct	agcgccttgg
960	gccagagcca	tcacttctgt	tgagcacctt	ggagtgtgtg	ccacgtgcca	tctgtggctg
1020	cagcacagca	catgtggaag	gggcactggg	cagcagcagc	acggacccag	gggcgggaac
1080	acagacacca	ggactgggcc	actctgccgg	agctgtgaga	tccccaaggc	ttcactgaag
1140	gtgcttgtcc	aggctccccc	ggtgggtgcc	ccgaggacag	gccgcagtcc	cggagtggac

tgccactgga	gtgtgggaat	ccaaccacgg	gacgtgtgac	atagacaagg	gaacggtcag	1200
tagttccctc	ggaatcccga	ataagggcgt	aagtggagtt	ctgcacagac	gggatggccg	1260
ggaacttggg	gggcctgtgg	ggagcacagc	ggctgcccag	cctcagtggc	gggggaagcc	1320
cacggagccc	cagcccagcc	tccagccctg	tacttccagc	acagcttcct	gcacagccta	1380
agaacttcct	ttgaggacgc	ggtcattcaa	cggaccagcg	tgccagacac	ctggtttcag	1440
agcaccccgt	gactttcatt	tcggcagtta	tcagatcaat	acagccgcag	aaccggccag	1500
caggaggaat	gcaagcccac	tccagacgtc	tcacctgagc	ttggaaaatc	caggggcctg	1560
accaggggcc	gcgcactgcc	cggatcgtag	caccctcccc	cggagaagtg	atcagggcct	1620
ccagacacac	aagccgtcgc	tgactcaaat	gcagagagaa	gcaccagggg	caggggagaa	1680
aacactcact	ttcactccac	acatgtagaa	agtgcacaag	tccacgctct	gcacttcagc	1740
cataaaaagc	acagctggag	gtgggggctc	tggctgctct	gcaccacgcg	cctcgatttg	1800
ggtctcaggg	cagcccagct	ggcatccagg	caccacccag	caaggccccg	agcctcagca	1860
ggccttgggg	gtcctctctg	gttacaagca	gatgccccgc	tggtggctcg	tgtctgagag	1920
tcgcagtgtg	catttcactg	catcttccaa	gagcaggggc	cagctttcag	gcctttcagg	1980
gactgctgcc	ctctgggcgc	acccgtgagg	cagcctcccg	cgccccaggg	atctgtcctc	2040
tgagtggccc	tcaggcacct	tctaagccac	ctgctgctac	actccctcat	ggttccaggg	2100
cagcaggacc	aaagccccag	cctcactcag	gactggagag	accctcaact	ttctgacttt	2160
caaaataaag	aaccaaacag	ggcgggcgtg	gtggctcgca	cctgtaatcc	cagcactttg	2220
ggaggccggg	gcgagtggat	cacctgaggt	caggagtgtt	caagaccggc	ctggccaaca	2280
tggtgaaacc	gtgtctctac	caggggtgca	aaaaattagc	caggtgtggt	ggcgcacgcc	2340
tgtaatccca	gctactcggg	aggctgaggc	tggacaatca	cttgagcccg	ggaggcggag	2400
cttgcagtga	gctgagatca	caccactgca	ccccagcctg	ggcgacagag	cgagactctg	2460
tctcaaaaaa	taaaaaaaga	ac				2482

<211> 3038

<212> DNA

<213> Homo sapiens

cagagttcag	cttgtggttc	ctgggtcctg	tgagggtccg	caggaggcct	ctgtgggcac	60
tggcaccttc	cgcttccact	gcccagcctg	ctgggagcag	gagctgagta	ttcgcctgca	120
ggatgccccc	gaggagcaac	taaaggcgcc	actgagtgcc	ctgccctctg	gtcaagtggt	180
gaggcttgtc	ttccccacgt	cccaggtact	ggcctcccag	ggaaggaagc	aaggcgcctg	240
gatggggctg	ggatccaggc	cacaaaggga	ggggcctgct	tcccgcttct	ccgtgggtca	300
caccctgagc	aggtgctggg	gccaggctct	ttggggagtg	tcctctgagc	atccctgctt	360
caggcctggc	gcctgtggag	acagtggcgg	ggcgggggtg	gtgcgccggg	gatcagggta	420
agaggaccag	agctgggtgg	aggtggccga	ccttttgtga	ctggggcctt	cacggttttc	480
aggagcccct	gatgagagtg	gagctgaaaa	aagaagcagg	gtgagaggcc	tggctgggga	540
ctgggcaagg	ccctggaaaa	caaccagggc	gcggggctgg	aggaggcctg	gaggagtgag	600
ggggagaaac	agccgcccct	catcctcatg	ctctctgaag	gggctcaggc	ttgcgctcga	660
tggggcacga	agtactggga	ggagtactgg	gaggagtctt	agcacctatg	gtcagagggg	720
cgagtgaccg	gcccagtgcc	aggcacccgg	ggagcacttg	ataaatgttt	ggctggaaaa	780
cgcagggagg	caaggatgga	aaatggtaac	atggtttggg	gcgcagagag	ggcaggaaaa	840
ccaagggaga	gaagagggga	aattgcgccc	ttttgggtgg	aagctgttat	ggctggacct	900
taaatgatct	tcgtagagtt	gtcgcccacc	ctggccctct	gtcttgagag	agtggcttct	960
cacctcacag	acacaggatt	attggtcctt	ttctgccccg	cccctgccc	tttttttt	1020
tttttgagat	ggagtggagt	ctctctgt	cgcccaggct	ggagtgcaat	ggcgtgatct	1080
tggctcactg	caacctccgc	ctctggggtt	caagcgattc	tcctgcctca	gcctcccgag	1140
tagctgggat	tacagactga	gggagctggc	cgtgcgactg	ggcttcgggc	cctgtgcaga	1200
ggagcaggcc	ttcctgagca	ggaggaagca	ggtggtggcc	gcggccttga	ggcaggccct	1260
gcagctggat	ggagacctgc	aggaggatga	gatcccagtg	gtagctatta	tggccactgg	1320
tggtgggatc	cgggcaatga	cttccctgta	tgggcagctg	gctggcctga	aggagctggg	1380
cctcttggat	tgcgtctcct	acatcaccgg	ggcctcgggc	tccacctggg	ccttggccaa	1440
cctttatgag	gacccagagt	ggtctcagaa	ggacctggca	gggcccactg	agttgctgaa	1500
gacccaggtg	accaagaacg	agctgggtgt	gctggccccc	agccagctgc	agcggtaccg	1560
gcaggagctg	gccgagcgtg	cccgcttggg	ctacccaagc	tgcttcacca	acctgtgggc	1620

1680 ccccatcaac gaggggctgc tgcatgatga gccccatgat cacaagctct cagatcaacg 1740 ggaggccctg agtcatggcc agaaccctct gcccatctac tgtgccctca acaccaaagg 1800 gcagagcctg accaettttg aatttgggga gtggtgcgag tteteteet acgaggtcgg 1860 cttccccaag tacggggcct tcatcccctc tgagctcttt ggctccgagt tctttatggg 1920 gcagctgatg aagaggcttc ctgagtcccg catctgcttc ttagaaggta tctggagcaa 1980 cctgtatgca gccaacctcc aggacagctt atactgggcc tcagagccca gccagttctg 2040 ggaccgctgg gtcaggaacc aggccaacct ggacaaggag caggtccccc ttctgaagat agaagaacca ccctcaacag ccggcaggat agctgagttt ttcaccgatc ttctgacgtg 2100 gcgtccactg gcccaggcca cacataattt cctgcgtggc ctccatttcc acaaagacta 2160 2220 ctttcagcat cctcacttct ccacatggaa agctaccact ctggatgggc tccccaacca 2280 gctgacaccc tcggagcccc acctgtgcct gctggatgtt ggctacctca tcaataccag 2340 ctgcctgccc ctcctgcagc ccactcggga cgtggacctc atcctgtcat tggactacaa 2400 cctccacgga gccttccagc agttgcagct cctgggccgg ttctgccagg agcaggggat 2460 cccgttccca cccatctcgc ccagccccga agagcagctc cagcctcggg agtgccacac 2520 cttctccgac cccacctgcc ccggagcccc tgcggtgctg caccttcctc tggtcagcga 2580 ctccttccgg gagtactcgg cccctggggt ccggcggaca cccgaggagg cggcagctgg 2640 ggaggtgaac ctgtcttcat cggactctcc ctaccactac acgaaggtga cctacagcca 2700 ggaggacgtg gacaagctgc tgcacctgac acattacaat gtctgcaaca accaggagca 2760 gctgctggag gctctgcgcc aggcagtgca gcggaggcgg cagcgcaggc cccactgatg 2820 geoggggeee etgecacce taacteteat teatteeetg getgetgagt tgeaggtggg 2880 aactgtcatc acgcagtgct tcagagcctc gggctcaggt ggcactgtcc cagggtccag 2940 gctgagggct gggagctccc ttgcgcctca gcagtttgca gtggggtaag gaggccaagc 3000 ccatttgtgt aatcacccaa aacccccgg cctgtgcctg ttttcccttc tgcgctacct 3038 tgagtagttg gagcacttga tacatcacag actcatac

<210> 80

<211> 1968

<212> DNA

<213> Homo sapiens

60	aggatcttaa	aaagatcagg	aactaccata	ttgtaaccag	agcagtgtga	agaaaatgcc
120	agaaagactt	aattacaaac	gaacaaaatg	aaactgccaa	tccaagcatg	atgggctttt
180	ttcacagtag	ctgaagaaaa	gttatctgag	gaaaacactt	accagcaaag	ggataacttt
240	tggatgtatc	gacaaatggc	gagcaccgtg	cagacatgga	ttggtgaaaa	tgatttcagc
300	gggatgatgt	ctgtccattt	gagagtaagc	tggataggct	gaagaaaaca	agagaaactt
360	agatggcaga	tgcgttccac	gtcaaacaac	ttgagggatg	agagatgaga	actgtcaact
420	aatttgagtc	ctgcttaaag	agctgaagaa	accacctcag	aacctggata	aaacatcagc
480	atgatctgaa	tccaaagtta	agaactgcat	tgagattgga	aacaaagcat	tgaagttaaa
540	cagacttaat	tttatagaag	agaccttcag	aaacaccgcc	aaaaatctag	agaattaact
600	tgaaggattt	aaaggaaccc	tgaagtagca	aagaaataac	gagcatgcca	gcagaaactg
660	ggttcacaaa	ataacaacat	tattaatgac	tggagaagtt	agtacacaag	cacggctcaa
720	tgaaaaaagt	tgtgaagcat	aaatgagact	actgtgccca	tcgttgatga	agtggaagaa
780	cccaagaaaa	atcagctcta	acaaagcaac	ttcaaagtca	caaaaagaac	caaggatata
840	gccgtgcaat	gagagcctgg	agctgagttg	agtaccaccc	ttgtgccgca	tctcaatagc
900	cccaggccag	tgctccaaaa	gagccagttg	atgaagccgt	ataaagaaac	gactggtctg
960	aagaatggtt	caggaattcc	tgagtctatg	aacacttcag	tctctggaaa	cctgcaggaa
1020	gcaaagttct	accggtgaca	atcagatcgc	caaaagaatc	aaggcagcag	tttgggagca
1080	ggcagagcaa	gtcagtgatg	tttggactca	ttcagaacat	ctccatgatc	agaagcaaag
1140	aacaaattgt	catttgtcta	tttgtatgca	aaggacaaac	gtgactcaag	acttgatgca
1200	ttctgaaaca	tttcaagcat	caatgaagag	tcacaaaggc	caagaacaaa	cagtagcatt
1260	gctttgaaga	gaacttggaa	ctgtgcttca	ctcttcaaga	gataagcagg	atgccttaaa
1320	atacggaaaa	gaaaggttca	tgaaatggaa	tatggatcca	aaactgaact	tcagcacaga
1380	aagttgaaat	gaagttcata	gaagaaaaat	acattcctga	agtaaacagc	cttgggagag
1440	agagagggca	gagctttccc	gtctcttgat	ctgcaagaga	gaactgctgg	gtttttggga
1500	cccagctcct	cgcctgtgtt	gcaggagggc	acggtgctgg	gaagaaggcc	gcttctgagt
1560	gccaggtggc	ctccggagct	caaagagaaa	ttagaatgac	cagaacctac	cacaagccac

ccttcaggag	cacgaagccc	tggaggaagc	actgcaaagc	atgtggttct	gggtgaaggc	1620
cattcaggac	agactggcct	gtgcagtctt	tactccctaa	cccgtttccc	gaaaaaggtg	1680
ctacctcctt	tccagacaga	tgagagaggg	caggacttca	ggctggatcc	accactgggc	1740
tctccctccc	ccagcctgga	gcacgggagg	ggaggtgacg	gctggtgact	gatggatggg	1800
tagtgggctg	agaagagggg	actaggaagg	gctattccag	gctcagccct	gctcctgcag	1860
ctttgccgct	gagtgtagga	aaaacaggca	tgacagacca	gggtgagggt	tgtgcccagc	1920
tgggccacgg	ccatgcgtgg	ggtggcccaa	taaacaccgt	ggactccc		1968

<211> 2018

<212> DNA

<213> Homo sapiens

tcttactatg aagct	gatct gcacaaaaca	ggctgttgtt	ttaaaatgga	gcaacgatct	60
gtactcgttc ttttt	ttttt tttttttt	ttttttgagc	cagggtctcg	ctctgtcgcc	120
caagctagag tgcaa	tggca caaacttgg	tcaccgcagc	aagcaaacct	gcctcagtgg	180
ctgagactgc aggca	cgggc caccatgcc	agctaatctt	tccatttttt	tgtagagtct	240
cactcaaagg gtctc	actat gttgctcatg	g ctggcctcgg	actcctgggc	tcaagcaatc	300
ctcctccac gcctg	taatc ccagcacct	gggaggccaa	ggcaggtgga	tcgcttgagc	360
ccagtttgag accag	cctgg gcaacatcad	aaaaccctgt	ctctacaaaa	tatatacaaa	420
actaagctgg gcgtg	gtggt gtgcgcctg	aatcccagct	acttgggagg	ctgaggcagg	480
aaaattgctt gaacc	tgaga ggtggaggt	gcagtgaaca	aagtgtacca	cacgccagcc	540
tgggcgacag agtga	gactc catctaaaaa	a aaaaaaaaag	aatacaggct	ttctaagtga	600
aaaggtgttc tggaa	ttatt aacagtgatg	g gttgcaaaac	cctgtgaata	tatctaaaaa	660
tcactgaaat gtaca	cttta aatgggtgaa	a gtttatggta	tgtgaataac	atttcaataa	720
agctatttta aaaat	aaact gtaagccggg	g tgtggtggct	cacgcctgta	atcccaaaac	780
tttggtagac tgaag	catge ggattgettg	g agcccaggag	ttcgggaccg	gcttgggcaa	840

900 catagtgaaa ccccatcttt aaaaaaaaaa cattaaccag gcatggtggc acgcgcctgt 960 ggttccagct actcaggagg ctgaggtgag aagatcagtt gagcccagga ggtcaaggct 1020 gcggtgagct gttatcacac cactgccctc tagcctgggt gacaacaaag caagaccctg 1080 tctcaaaaaa acacaaagag actgtagttg ctttaaaaat atgacttctg tatgctatgt 1140 ggttacagaa aataagatca tgtcaatttt ttctttttta gaatgccaaa agtttcttta 1200 aggggaaaaa aatggaacta tagtaaacag actataaact atcttactga agagtctaaa 1260 atgaagcagg tctatcagtg taccttaaca cagcttgaaa taacaatcaa ctcttaaatg 1320 cttttggtct aagactgttg ccaagtaata tggtttggat ttgtgtccct acccaaatct 1380 catgttgaac tgtaatcccc aatgttggag gaggggcctg gtgggaagtg attgtatcat 1440 gggggtggaa tcccctggc tgttctcatg atagtgagct ctcacgagat ctggttaagt 1500 gtgtgacaac tcccctcac tgttctcatg atagtgagct ctcatgagat ctggttaagt 1560 gtgtgacaac tccccttcgc tgttgtcatg atagtgagct ctcacgagat gtggttgtgt 1620 gacaactccc cctcactgtt ctcatgatag tgagctctca acaagatctg gttaagtgtg 1680 tggcaactca ccctcgctgt tctcatgata gtgagctctc aggagatctg gttaagtgtg 1740 tggaaactcc cccttgctgt tctcatgaaa gtgagcctcg cgagacctgg ttaagtgtgc 1800 agcacctccc ccttgctgtc ctcattacag tgagctgtca cgagatctgg ttgtttagaa gtgtgtggca cctcccactt tgctgttctc atgatagtga gctctcacga gatctggtta 1860 1920 agcatgtggc atctcccct tctctctct ttcctcctgc tttggccatg taagacatgc ctcctcccc ttagccttcc accatgattg tgggtttcct gaggcctccc cagccatgct 1980 2018 tcctgtacag ccgagccaat taaacctctt tataaagt

<210> 82

<211> 1795

<212> DNA

<213> Homo sapiens

<400> 82

cccttcctca cacacccacc tcagacctgg gagaggactg tgtgtccccc actgccccat 60

120 cggatgctct gggctctgcc tcagggaact cgggtttggg gaaatgtcta tttcagaagt 180 actggagtgg ccagtgtggc agtggccact cagggtgggc tgggtcctga gacccatccc 240 cgacacctct cctgctgaac cctcaggctg ctccccacac cagggtgtga ctgaggggta 300 cacaggectg gatttetggt gtgaggaagg ggetageace teceetgttg tgtagecage 360 acaggcacaa tttgtgggtt tggtggcagg taggtggtgc gtgggagaaa ggacagtgtt 420 agaggtcccc actccgtggt ctaggatcat gaaaggtgaa cacacaagta cacaaatgtg 480 ccatgccctg gcatggggct tatgtgtgca caggcaaggc actcggtgtg tgtgtgcgga 540 ccccagggtc ccaggtcatg tgaagcgtac gtgtgtgtgc attgtatgtg agtgtacatt 600 gtgtgtgcat tgtgtgtgca tgtggccaaa cagatgtgac ctcccagaac acagtacccc 660 tecaceteta ecegagetea gaeageegag etetecettg teetgtgtgt gtgteagtgt 720 ggccacgtgc gtaaccccag gtgggctgtc ctgagctggg ggcctgcctg tcccttccca 780 gaacgecect etgeaggaca ggaagtetge eccaagtetg gecaeggeee teetgeteee 840 atctcgggct gcttgggaga catcagagca ggccccagcc cccagtcccc tcttccggcc 900 gcctggacag gacccccatt cagcccaggt gtttccggaa gtcccacggc cttggggcca 960 caggagaagg gttgaagcgt ggctggggca ccactcccc cacctggagt ggcattgggc 1020 ccacagetge ccatetetgg geeteaggtg gaccagggga tetetaaggg tetgetgtge 1080 cetttetatg egteeteeae ateetatgat gtgeetgett gttggetget gtetgtgte gtcctggcat gttgtctgga ggctggtgtc ttttgcatgt tcttggacaa atgtgtgcta 1140 cctgcccagg cgcctgcaac cattgagccc acatgtgccc cacgtgtgcc ctgcgggtgg 1200 1260 tecegggeet ggeeaggget eagtgeteet etteeecte eteeetgtte eeaceetea 1320 tgaagcacac tgcgtgtcca tcccatgtac ccgtgggtcg acgcacgctc ttgccacgcc 1380 ctgagcgtgt acacatgatg tgttctatgc attcaccctg cccccagcc cgccctgcag 1440 aggacaagat gggtggcccc ggctcccttt cccctaaccg cccctgcccg ctgtgcagcc 1500 gtgtgcgttg gcgtgtgttt ctgtgtcact ggcgtgtcac gtgatgtagc cgtgtttgct 1560 gacatgagec cetgececet tetetgttte teegttggtt tetagagete teteceteee cttctcagag gggacaggac tcctggggtc tggctggggc ccagagccag gccgccctct 1620 cctgttagcc ctcagagtcc catttctatt ggtgaccaac ttgcaaatgg ataaaacaca 1680 1740 1795 cctgggccag gtcaggcct gtgggacggg agaaatagca accaatccaa cagcg

<211> 2594

<212> DNA

<213> Homo sapiens

<400> 83

60 attagcaata acttaaccta aagaaaaata ttctaatagc aaaccttaag tgcttagttt 120 gtgccagtta ttattttaag caatttttat acattatgtc atttcatcct tacaacaacc 180 ccatatgcta ggaactagtt atattcccat tttatatatg aggaaatgag gtacagagaa 240 aatttaatga tttgcaaggt taccaccact gttaagtact ggaaaatttg aacccatgta 300 gcctgtctct tgtactacta tactttgtag ggactccaaa tacaatctta ctcgtttaat 360 gcttaacaac agtagaattt atattggtta ggtaaattac agacctcctc agttttactt 420 aatagaatta tttgtaaaac tagcttattt atgagacaga gtcttgttct gtcacccaag 480 ctggagtgca gtggcacaat ctcaggtcac tgcaaccacc gcctcccatg ttcaaacaat tctcctgcct cagccccag agtagctggg attacaagtg tgtgccacca cgcccagctc 540 600 atttttgtat ttttagtaga gactgggttt taccacgttg gccaggctgg tcttgaactc 660 ctgacctcaa gtgatctgcc ctcctcggcc tcccaaagtg ctgggattac aggtgtgagc 720 caccacacct ggccaaaact agtttatata cggaccaggt gaatggtcca tatataaatc 780 ataaatgatt cctcaacact catgagtgaa aaaagtatga aataatccct gtcatactta 840 cattigcctg tgagtactic atggcaaatg tettaatetg titgatgtag atgtigtigt 900 agaactgaat gaggtctccc ctctcctctt cttccatgtc actgttggca cctgtgaggc 960 gagtaggtgt gggaggagca ctgctgggct gtggaactgg caaggtgctg cttgacctca 1020 taactggact ggagteteta etggetgeag eeaggagaac aaaggetgte agtacaaagg ctgctaatat tgactgtttt aattttttaa aagtaggaga aagggaacag ctacctgcac 1080 1140 tacttgctaa taacagtgaa taggcactct gttcttcaca ccaaaaagca aagctcagct 1200 aggatattaa ctttctccct atgccataac catagcaagg gctttctgag tagtgtccat 1260 taataagtta caccaaattt tctaggacct aagccctgta ctaagtggta caaagcaaca

1320 ggcaggggat ggtatttcca tagcatggtt ccaattgaca tatcagacct ttctggaact 1380 caggcaagca gattcctccc tgaaagctct aattctcctg gagaaaaatg ttacataata 1440 tgtgccccaa agctatgtaa tggacagttt tgccagctag aatatggttt actgatctat 1500 aaaacacttt catagtttct atagttattt catttagtaa tgcttagtta cttcttcaag gcctaaaaag taagaaaagc tcctaatttt gtcttgtagt tcacaaagat cccacttact 1560 1620 tctatctttg tttagttctg ttggagaatt ctgatggctt ctgctatcac tgctgccaga 1680 atttettett tttettttee ettttateaa aacaetteta tacaeettta gagaaacaat gagaagggga cataaactag tatttgttga gcacaccctt ggtgatagga ccttcacata 1740 1800 tgttacttgg ttttcacaat aacctgtata gcaatagttg tcctcagaac aggttgagaa 1860 acataactca aattataaca gatccaggat tcaatcagag cccatctagc atcacatgcc 1920 aagtactacc tgcagtacta cactgcagtg acagcaccca accataatgt caagtcattc taagtaagat acacagatct ggccgatttg cctctcagag atgaatggta ataaaggcaa 1980 agtgggtttt aaatttccat gtgacattct gttggttaaa cctacagtat gtttactaaa 2040 2100 ccagaatgaa aggtgacata gaaaccaagt aacttcttaa ttcctatctt gtgatttttc 2160 tgaattaaga aggcaatcaa atatttaaca ttgttgcctt ttgaggaaaa gagaccttaa 2220 tcaacatgtg acatcaagaa taaagattaa agtagaaact tcccttaagt agagtcccag gtgtttatct tggaaaaaag gccacagagt caactatggt taattttttg tattcatcac 2280 2340 agactttaag ctttattttt cagcccatag agaaaatgta gttacctggc tccgggcctg 2400 cggctgagtc ctataacaac gcataatgtt ctggaaggac ttatcttctt ttgtgacctg 2460 gcaaacaata agagtgctct gagagacatg gcaactacca ccataatagt gtgaggagct 2520 ctgtgaacct gctgcccagt aaaaggggtg aaaattatat aaaagctatt taaagtctct ggaaatggta ttaacggcat atagcaaatg aagatacatc gattcaagaa tatctattaa 2580 2594 aattcaataa aaac

<210> 84

<211> 1901

<212> DNA

<213> Homo sapiens

gtgcgtaggt	ccagtgagga	cgagggtgaa	atttatatct	ctgcccaggt	ctcggtgcct	60
gcaccgccat	agacaccacc	agggcactgg	ggacgctggg	tgcactggag	cccgagaccc	120
ctcttcctgg	ccatggctgt	cctggtcgcc	agtactgtgg	gctgtgattc	tgagtatcct	180
attgtccaag	gcctccacgg	agcgcgcggc	gctgctcggc	tgccaggacc	tgctgaggac	240
aaacggtgtg	tgcagagccg	ggcgcctggg	cgcccggggc	gtgtgcggcg	ggagcgtctg	300
agaccccaga	gatggagtcc	tgggctcggg	gacgcaggcg	ctgctgcaga	ccacgagcgc	360
ggagcttggg	gaggcgcagg	cgaagctgat	ggagcaggag	agagccctgc	gggaactgct	420
gacccatggc	ttggctgaag	ccggcaggga	ccgcgaggac	gtcagcaccg	agctgtaccg	480
ggcgctggag	gccgtgaggc	tgcagaacag	tgagggttcc	tgtgagccgt	gccctacgtc	540
gtggctgccc	ttcgggggct	cctgctacta	tttctctgtg	ccgaagacca	cgtgggcaga	600
ggcgcagggc	cactgcgccg	atgccagcgc	acatctggcg	atgtaggggg	cctgggggag	660
caggacttcc	tgagtcgtga	cactagtgcc	cgtgaatact	ggatcggccg	cagggccgtg	720
caacacctgc	gcaaggttca	gggctactcg	tgggtggacg	gagtcccact	cagcttcagg	780
taggggaagg	gctcctggtg	aaacctgggg	gccacaggtt	agactctaga	ggacatgttt	840
tgaggccgag	gtgggcggat	cacctgaggt	caggagttca	agaccagcat	gggaaacgtg	900
gcgaaacccc	atctctacta	aaaatacaaa	aaattagccg	ggcgtggtgg	cacacgcctg	960
taatcccagc	taaccctgga	tgctgaggca	cgagaatcac	ttgaacccag	gaggcagagg	1020
ttgcagtgag	ccgagattgc	gccactgcac	tccagcctgg	gagacagagt	tagactccgt	1080
ctcaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaagacat	gctttggcca	gatctcaggg	1140
accccttggc	tggggctcca	tgcttaggga	tgggcaggct	ggaccctagg	aagtgtcctt	1200
gggttaaatt	ctgggcgtta	gtaagttata	tcccaggtgt	atactcaggt	tagacacttg	1260
gggtgtctag	cgtagaccca	ggcaataaac	aggctagagc	ctgggaagga	agtgggggcc	1320
ccgggtccat	ccttagctta	gattcccagc	atcacccccc	gcccggccat	tcaaccactg	1380
cagccactgg	ttacaggggg	aacgcaatga	attttggggg	tgcgaggcct	gtgtcatgat	1440
tctgggcatg	gggctgtgga	tagacccacc	acgtgatgag	aaggctggcc	ggatctgtca	1500
gcagaggcac	ggtgctgacc	ccgcccggtg	ccccagagcc	gtgcccagtg	cccaaagggg	1560
tgctgtgcac	catcccggct	actggaaccc	actgccaagg	attttctttt	ccccatccac	1620

cactgctgag aaccaatcgg ccaggcccag ccctgtccgg tgcctgcact ctgggacctc 1680 tgctctgact tcatgcaaac ctaacctaac cttcactggc tccaaaatct ccatttctgg 1740 atcccagtgg tctgacccca cctctcctcc tagccaaggt cagacaactg aggaatggag 1800 ctatttggtt ttcctgcact ttcccgcaaa ggggaaaatg gtacttcctg caaagctctc 1860 tttgcagcct gggggagcat caataaaggt ttgagaaatg g

<210> 85

<211> 2375

<212> DNA

<213> Homo sapiens

<400> 85

60 atteacttga tatactgttt cettteaace tecacattet caccacetgt ttetttgttt 120 gagcaccaat aaatagtgtg ggctcccaga gctcggggcc tttgcagctt ccaccctcac 180 gatggctccc tggtcctact ttctctctca aactttttct cattcctttg acttgattca 240 agatttcaaa atcttgaaat ccagccctgc caagggaagg atggggggac atgtcaatga 300 caaacaacgc cggacactag taaatgacaa ggacagattt ttgccagtaa tgcactattg 360 caatcaggaa aggagtccag cacgagctga ttttgatttg tgcagaggtg actgggtgct 420 ttcaagggag aatgagggga ccaggtgtgg tggctcatgc atgcctgtaa tcccagcact 480 ttgggaggcc gatgtggtcg gatcgcttgg gatcgggagt ttgagaccgg cctggctaac 540 atttttttc ccatctctac caaaaaaaac aaaaaacaaa aattggccgg ctgcggtggc 600 acggcctgtg gtcccagcta ctcggggggc tgaggtggga gagttgcttg ggcctgggag 660 gcggaggttg cggtgagccg aggtcccacc actgcactcc agtctgggca acagagcaag 720 actccatctc taaataaata aataaagaaa gaatgagggg atagggagag ggtaagcaag tcatggaagt gagaaattat agaatgtggg gagagggctt tgtccatggg aaacccatct 780 840 gggtttgatg acgggcttat tgaagttagg ctcctgtatt cccacagaga ctggaagaca 900 ggggccctgt cttcagttgt tggctggaac aaacagtaaa ttcttctgac agccttgagt 960 tttctcaagt aggcacttta ggcaggcggt gacaggggcc ctcaggtcat cacaggggtg

1020 agctgttaga gactatgata gtgtttgttc aagtccttat aagccaaggt tgaggcctaa 1080 tagagaaggg ggctcagagg agcccggccg aagtttggac aaggagagaa tctttggcag 1140 aggagatgtc accaggctct cgggaggagg cagtaatatt gttgcacaac cagagggaag 1200 cctgcaagcc cagcctgtgg aaacagaggt cctgagagca cagcccaaca ctacggaact 1260 ggcctgtggc agagactaga atgattaggt gggcacctgc tcccctgaat aagaccacac 1320 ttcccactct ctctcacaga cagaaacatt cctcaatggg atgtgaacat aagtgcttcg 1380 caccacttcc aggtcacaca ctcacaggga aagtgttctc cttctctttt tctttcccct tcccactggc tggaatacca ccccacaca cagacaagga catgaccctg gaaaggtgga 1440 atggaaagat agaaggagcc tggcccactg atggctctgt gaagcagagc ctccatacca 1500 actcaaactt ctacacacag aagaaaacca gttctcttgt tttaaaccaa tttattctgg 1560 gtctcttttg ccccagccaa atttacatcc aactaatgta atgcctatcc tcaccaaagg 1620 1680 atgggcagcc tgacaggtca tttcagagca tccagagaac agagtgggtg gcagaaagag 1740 atcaaggaca aggccaggca cagtgcctca tgcctctgat cccagcactt tgggaggctg 1800 aggcgggcag atcgcttgag gccgggagtt catgactagc ctgtcagcat ggcaaaacat 1860 catctctaaa aataaagaga gggagatcaa ggacaataca aattgcaatc taatgaagat 1920 attgctgcaa ggggagtaga cagtcatccg ttggcctctg caatcaaata tttccccaga 1980 gaatcaggga gggaggagtc tcatgctggg tgccggccct gtgccactgc tgaaaatctc 2040 actgccacag cgtcctgagc tggcagtggc ttccacggta tctgggagcc aggagagcgt gaacctgcga gccccaccca tgagggctga ttaggaacac tggaagaact gcaagagggg 2100 ctgggctcgg tggctcacac ctgtaatccc agcactttgg gaggccgagg cgggtggatc 2160 2220 atctgaggtc aggagttcga gaccagcctg accaacatgg tgaaacccca tctctactaa 2280 ataaaaaatt attggatgtg gtggtgcatg cctatagtcc cagctacttg ggaggctgag 2340 gcaggagaat cgcttgaacc tgggaggcgg aggttgcagt gagccaagat ggtgccattg 2375 cactccagcc tgggcaacaa aagcgaaacc ctgtc

<210> 86

<211> 1734

<212> DNA

<213> Homo sapiens

agcatccagg	caggacggca	gcagctgagc	agaggagaga	ggaggaatga	gtccccgtt	60
ctcaccccgg	ggagcggttg	cctcgtgagt	ccaaggagaa	tccgcccttt	cgttttgcgc	120
aggtggagat	ctcgcgggcc	cagttcggag	tcctgcaaac	tgtggaggag	atgccgctgt	180
cccgtcggtc	tggggacagc	ccagctcccc	ggatcccggg	ctggagagac	gcgtcgcggc	240
cccggggcct	ggtggcacga	gcaggaagga	ggacccggcg	gcgggctctg	cctgggcttg	300
cctgggcttg	ttccgagccg	ggctgcttct	cggtgaccac	gcagatcggg	ggcatttgga	360
gattttgcgg	gagtcctgca	gccaagctcc	ggggcaggag	aggcctggaa	gcctgcacta	420
cctgctcgcc	ccgtcccagc	atgcacccag	gctggaatgc	agtggtgcaa	acaaggctcg	480
ctgcagcctt	cacctcctgg	gctcaagcgc	tcctcccgcc	tcagccttgc	aagtagctga	540
gactacagat	tacaggaggc	agcagaagag	cgggtttctc	ccacctcccc	ccggacgccg	600
gagacaccgc	ggagcctgat	gtccctcaga	gctttaatct	tccctcagt	cgcctttccc	660
ctcacccgcc	tctaattaag	tcagaaaggc	cctgtattta	tttgcccatg	aactgacaca	720
gcaaaccaac	agcagccatt	gtagtgtgaa	cggatttgcg	accaggcaag	gggcttcagc	780
cgggattacc	cgccccgcag	ccggatgaat	gtgctgagca	caaagtctgc	tcaaagccga	840
gcaaacggac	tatttgtgaa	aatgccatcc	tggctcaagt	ctgattaaga	ccgggggtcc	900
ccaggccgtt	tgatcttcgc	tcatcaaaga	gagtctttaa	acaagcttca	ttttacacta	960
ctgtatgcta	gcgacgggtt	gtgacaccca	agtgcagcca	ccgtgagcac	ccggcactgg	1020
gagcgcgtga	acaataatgg	gggattcgcc	gtgctgcgcc	gtgcagggcg	cggggcctgc	1080
gcgctgggaa	acgcgcccgc	actggaggca	gggccgttgc	ggaaggactc	aggcttggga	1140
gcccctaggt	ttgccagcca	ggtagttccc	tgacgtgact	cctgccacgg	actcctagac	1200
tcctctgaaa	attattttac	ttttgtaact	taagggtgat	gaagaatcct	tacacgagtt	1260
aattatacat	ccctcctgct	cttccccgcc	aaaagttaat	agttctattt	aatagcctac	1320
atcttccact	cttcagcatt	tctaagactg	ggtgtcaaga	ctaaagtgtt	tttaaggtcc	1380
tactttctac	ttttcacctt	aaggtccttt	acaattcacc	agttggagaa	ctggtgatag	1440
ctgaaaacat	cagctttaaa	tattacaacc	aattttgtga	tgggaaaaca	acctccacac	1500
acacacacat	acacacacac	acacacacac	tttttaaaaa	gtcgcctggt	ccaagtaatt	1560

caccttattt ccaggcactt aatacttaca tgctagtctc ttcaaaatcg acatgctcag 1620 tatcagtgtc aatgattatt acttgatctt taggctgcat aaaagaacag actccttgca 1680 ggatgttctt atttaacctg agtacaaaag gccttctctt ggcagtgctg aaag 1734

<210> 87

<211> 1493

<212> DNA

<213> Homo sapiens

<400> 87

60 caggttctat tgaattcttc cacagagata agttaatttt acatagtgtt taggatatca 120 acaatttttg tggcccttgt aattcttggt tatagtttaa aaaaagagag actgtgttac 180 ttgagatact tacttctaca ttttaaaata agggatgagt atcttgatgt tattactggt 240 aattttgaga aaagaaaaat atatgttcaa actttattaa ataaacagga atactagttc 300 cctctacctc tcaagttact tttaattgga aagtattctc cttatataat tttactctga 360 actgtccttt aggtcttgtg ataatggtca ctgtatgctg aatggaacac atggtccatc 420 ttcagagaag aaatcaaaca tccctgactt aagcatatat ttaaagggtg aagatgcttt 480 tgatgecete cetecatete teccacetee eccaceteet geaaggeata gteteattga 540 acattcaaaa cctcctggct ccagtagccg gccatcctca ggacaggatc ttcttcttct 600 teetteagat eeetttgttg atetageaag tggeeaagtt eetttgeete etgetagaag 660 gttaccaggt gaaaatgtca aaactaacag aacatcacag gactatgatc agcttccttc 720 atgttcagat ggttcacagg caccagccag accccctaaa ccacgaccgc gcaggactgc 780 accagaaatt caccacagaa aaccccatgg gcctgaggcg gcattggaaa atgtcgatgc 840 aaaaattgca aaactcatgg gagagggtta tgcctttgaa gaggtgaaga gagccttaga 900 gatageccag aataatgteg aagttgeeeg gageateete egagaatttg cetteeetee 960 tccagtatcc ccacgtctaa atctatagca gccagaactg tagacaccaa aatggaaagc 1020 aatcgatgta ttccaagagt gtggaaataa agagaactga gatggaattc aagagagaag 1080 tgtctcctcc tcgtgtagca gcttgagaag aggcttggga gtgcagcttc tcaaaggaga

ccgatgcttg ctcaggatgt cgacagctgt ggcttccttg tttttgctag ccatatttt 1140
aaatcagggt tgaactgaca aaaataattt aaagacgttt acttcccttg aactttgaac 1200
ctgtgaaatg ctttaccttg tttacagttt ggcaaagttg cagtttgttc ttgtttttag 1260
tttagttttg ttttggtgtt ttgatacctg tactgtgttc ttcacagacc ctttgtagcg 1320
tggtcaggtc tgctgtaaca tttcccacca actctcttgc tgtccacatc aacagctaaa 1380
tcatttattc atatggatct ctaccatccc catgccttgc ccaggtccag ttccatttct 1440
ctcattcaca agatgctttg aaggttctga ttttcaactg atcgaactaa tgc 1493

<210> 88

<211> 2531

<212> DNA

<213> Homo sapiens

<400> 88

60 tttcatcaaa actaaaaatg actgctctgc aaaaggatga tgctaagaga ataaaaaaga 120 caagctaaga ttaggagaaa atattgcaaa gaacatatcc agtgtgtgtt ctgaatatac agagaaatct caaaactcaa caggaagaaa acaagccaat tgaaaatggg caaaatactt 180 gaacagacac tttaccaaag tggatataca gatatcaaat acacacatga aaagatgttc 240 300 agcatagcca tcagggaaat gcacattaaa gccacagtga gatatcactt acacccattg 360 aaaaatgact acaataaaaa aaaaatctga tagtaatacc aactgtcatc gaggatgagg 420 aacagetgaa agteatgeat tgetggaggg aacatgeeac tgtggaaaca ggtgggtget 480 ttcttataga cttgtatgtg cactcacctt atgcccagga gtccctctcc tgtgtgttca 540 acccagagat atgcaagctg tgttcacaca aaaacctgta tgtgaatgat tatactagct 600 ctctttataa ttgcaaaaaa aaaaaaaaac ctggaaacaa cccaagtgtc cttcatctgg 660 ataatcctta aggataaact ggtgcgtcca cacagtggaa taccactgag cagtgaagag 720 gagccagtta ttgaaacagg taatttggag gaaccccaga aacggtacgg tgagtgaaag 780 aaacttgtct tgaaaggtta tgtactgttt ggttccattt gtatgatatt ctcaaaaaga 840 cacaagacca tggggatgga gaccagatcg gtggctggag aggctggggt cggggagggc

900 atgaccacca gagaaaaggg tgaagagtgt tttgggtggc agagctgtgt gtatgctggc 960 tgtggttgtg aggacaaaat ccacacaagc gctcaagttc gtaggctgta cgccagaaaa 1020 gctgtttcac tacataactg aaaaaataag attgaaaaat aagatgtata tattttttgt 1080 gtgcgtgtgt agaaaaatac ttgaaggtaa actgcagagt gataacagtg gttccttcta 1140 ggtactgggt taatatgtga tttttatgtt tgtttgagct tttctaagtt ttctacattt 1200 tccgtacaaa acatgtatta cttctgtaat aaaagcagct tgagattatt taaggaagca 1260 aaacacttct gttgtttctc atcaactaca ggatgaagtg caggctccct gggtggcttg 1320 caagggccac aggccttggc cccacctcgc tggtgctccc tctactcctt tctgtgtttg 1380 aagcaagttc tggttcagac agaaagcctg gcctttgagg gcgttgggtc cccacttcct 1440 cagtcataga tgtgatgtgc ttcccttgac ttgggacctt ctgagggatg caaggtggac 1500 caaaggaccc gtgaatggcc agggcatgcc tgcctggctt tcggtttctt aagcagtgat 1560 ttcagtccac ttaaagggtg tgaaaattct gagaatgcta cggaccaaat atattttatg 1620 taacagttgg gacccggcaa cacttcaggg ctctttcaaa atctggtagc tacgagctct 1680 tccgtgactg agatgggaca agagtgaaga tttgtccttg cttttagctc tgctccagtt 1740 catagttcta atgggaaatt atgtgactta aacccagget gtgagatgca tcagtgacgt 1800 gtgggcataa aataaaccct cgagatgttc tcttgcatgg tacactggcc taggcaggaa tattcttgag gctaaaactg tagaactgtc agactagtgt tacgaatgtg gtggtgagag 1860 gcctgtgcag ccgcggggcc tgtgatgtgt ctcctgtgtg tctttcactc ctatgcagtt 1920 tgagttcatg atcgagtcca tcctgtatgc ccgggatgcc tggctgaagg aggacggggt 1980 2040 catttggccc accatggctg cgttgcacct tgtgccctgc agtgctgata aggattatcg 2100 tagcaaggtg ctcttctggg acaacgcgta cgagttcaac ctcagcgctc tgaaatcttt 2160 agcagttaag gagtttttt caaagcccaa gtataaccac attttgaaac cagaagactg 2220 tctctctgaa ccgtgcacta tattgcagtt ggacatgaga accgtgcaaa tttctgatct 2280 agaggtgaga aaaagatgaa ttgctcctta cattcgataa tcagtgacca cgaaacactc agaccagagc ctggcttatc aaaaaccttc agtgagtgct gggggtgtga gtgaataact 2340 aattatttta ttatgcaaat aagtgaattt ataaaacgtt tgctactgat tttttccagt 2400 2460 cttttttctt ttttacgttc tattttgatt ctttcatatt gtacaccatt ttatgtctcc 2520 agegtettea ttttagattt atgtttaata tteteageat etteaaaate aaataaatta 2531 tatttcgttt c

<211> 2116

<212> DNA

<213> Homo sapiens

<400> 89

60 tttattttac tcattttcac tggtatgtag taatatttca taatgatttt aatttgcgtt 120 tttctaagag ctaatgatgc tgaacatttt ttcatgtact tatttgccat ttgtatattc 180 tcttcagagt agtacccaca tcttttgcct atttttaaat tgacttgttc atattcttat 240 tttgagtttt tagagttcgt tttctatcct agatgcaagt cctttattgg atatgtgtct 300 tgcaaatatt ttctcccagt ctgtggcttg tttcttcaat attttaatag tgtctttgtc 360 agagcaagag tttttaatgt taatgaaatc caacttacca gtttcttctt ttatggagtc 420 tgcttttggt tacatgtata aaaactcttt gcctaatccc aggtcacaaa gatatccggc 480 tgtgttttat tctaaacagt ttaaacattt ttgtacaaaa tgtgaggttt agattgaggt ttgtttattc attttgctta ttgatgttca atgtttagtg ttcagtgtcc agtcctatat 540 attgaaaaga ctgtcctcgc ttcattgaat tgattttatt tcttttgcaa aatcgattgg 600 ccatatttgt gtggagacag ggtctcacgc tgttgtccag cctagagtcc agtagcacga 660 720 teatggetea ettgeageet caaacteetg ggeteaagea aaceteetgt eteaacetee 780 caaggagctg ggacacaaca gttgtgcacc atcatggctg gcaatttttt ctttttttt 840 ttttctagag acaagatctc gtgatactga ccttgctggt ctcgaactcc tggcctcaag 900 tgatcctcct gcctcggcct cccaaagtgc tgggattaca ggcttgaacc accatgcctg gctgctttat agtatttctt aaagttcatt tgattcctct aactttattc ttccctttca 960 1020 gaattatttt agetetteea gtteetttgg etttetgtat aaattttaaa attagettgt 1080 ctatatttta aaatatctga gattttgact gaatttccgc tggtatcctg ttccccaaag 1140 agaaatggac aggaggaaag gagacagaac attacctgtc aggaccccta ctatggctgg 1200 tggcctattt tctattgaca gaaactactt tgaagagata ggaacttacg atgcaggaat 1260 ggatatctgg ggtggagaga atcttgaaat gtcttttagg atttggcaat gtggaggctc

cttggagatt	gttacttgct	cccatgttgg	tcatgttttt	cggaaggcaa	ctccatacac	1320
ttttcctggt	ggcactggtc	atgtcatcaa	caagaacaac	aggagactgg	cagaagtttg	1380
gatggatgaa	tttaaagatt	tcttctacat	catatcccca	ggtgttgtca	aagtggatta	1440
tggagatgtg	tcagtcagaa	aaacactaag	agaaaatctg	aagtgtaagc	ccttttcttg	1500
gtacctagaa	aacatctatc	cggactccca	gatcccaaga	cgttattact	cacttggtga	1560
gataagaaat	gttgaaacca	atcagtgttt	agacaacatg	ggccgcaaag	aaaatgaaaa	1620
agtgggtata	ttcaactgtc	atggtatggg	aggaaatcag	actcaatgga	cctgtaatca	1680
tgttaaaatg	ccaccatatg	agaggaaatc	agttatggga	atatgatgct	gagagactca	1740
cgttgcgaca	tgttaacagt	aaccaatgtc	tcgatgaacc	ttctgaagaa	gacaaaatgg	1800
tgcctacaat	gcaggactgt	agtggaagca	gatcccaaca	gtggctgcta	aggaacatga	1860
ccttgggcac	atgaagatca	tgtcctccaa	gccatgaaag	tgtctacgct	tttgtttttc	1920
cattatttca	attgggggaa	aatattaact	ttgctgaatt	gaaagtttta	aaaatccttt	1980
tagtattcta	aaacacaatt	gtttctaatt	cgtttctaga	aatgtttgct	tatttcccta	2040
ctaaaatttg	tatctgatca	aagcacataa	gaatataaat	aatagcaaac	tactattaaa	2100
caacagaaca	acttgt					2116

<211> 1841

<212> DNA

<213> Homo sapiens

agtttcggct	cggcagaccc	ggcgagccca	gtggccgcgc	tccggtgcgg	cggcgcccga	60
ggcccgaggc	ggaagtggga	cggccaagca	gggaagcgag	ggctcgggat	cgacggccgc	120
ggggcgccga	cgaggagtgc	aggactcagg	aagggcgagt	gcgcggcgac	agagcccggg	180
gaaggaggca	gggcaaggcc	gggcttgggg	gcaggtggtc	cgggcatcca	gccttgaaga	240
tgcacaagag	gaaaggaccc	ccgggacccc	cgggcagagg	cgccgcggcc	gcccgccagc	300
tgggcctgct	ggttgacctc	tccccagatg	gcctgatgat	ccctgaggac	ggggctaacg	360

atgaagaact	ggaggctgag	ttcttggctt	tggtcggggg	ccagccccca	gccctggaga	420
agctcaaagg	caaagccgag	gcctgaggcc	cctcatccgg	ggctggagac	caccttgcag	480
gagaggctgg	cgctctatca	gacagcaatt	gaaagcgcca	gacaagctgg	agacagcgcc	540
aagatgcggc	gctacgatcg	ggggcttaaa	acactggaaa	acctgctcgc	ctccatccgt	600
aagggcaatg	ccattgacga	agcggacatc	ccgccgccag	tggccatagg	aaaaggcccg	660
gcgtccacgc	ctacctacag	ccctgcaccc	acccagccgg	cccctagaat	cgcgtcagcc	720
ccagagccca	gggtcaccct	ggagggacct	tctgccaccg	ccccagcctc	atctccaggc	780
ttggctaagc	cccagatgcc	cccaggtccc	tgcagccctg	gtcctctggc	ccagttgcag	840
agccgccagc	gcgactacaa	gctggctgcc	ctccacgcca	agcagcaggg	agataccact	900
gctgccgcta	gacacttccg	cgtggctaag	agctttgatg	ctgtcttgga	ggccctgagc	960
cggggtgagc	ccgtggacct	ctcctgcctg	cccctccac	ccgaccagct	gccccagac	1020
ccaccgtcac	caccgtcgca	gcctccgacc	cccgctacgg	cgccctccac	aacagaggtg	1080
ccccacccc	cgaggaccct	gctggaggcg	ctggagcagc	ggatggagcg	gtaccaggtg	1140
gccgcagccc	aggccaagag	caagggggac	cagcggaaag	ctcgaatgca	cgagcgcatc	1200
gtcaagcaat	accaagatgc	catccgagcc	cacaaggctg	gccgagccgt	ggatgtcgct	1260
gaattgcccg	tgcccccagg	cttccccca	atccagggcc	tggaggccac	caagcccacc	1320
cagcagagtc	tggtgggtgt	cctggagact	gccatgaagc	tggccaacca	ggatgaaggc	1380
ccagaggatg	aagaggatga	ggtgcctaag	aaggtttgag	ggttggggcc	gggcgcagtg	1440
gctcacacct	gtagtcccag	cactttggga	atccaagatg	ggaggatcgc	ttgaggccag	1500
gagtttgaga	ccatcctggg	ccacacagtg	agacccccgt	ctctacaaaa	aaattttta	1560
aaattagcca	ggcatggtgg	gactcacctg	tagtccctgc	tacttgggag	actgaggtgg	1620
gaggatcacc	tgaactaagg	agttcaaggc	tgcagtgagc	catggtcatg	ccactgtacg	1680
ccagtctggg	tgacagagca	agacctcatc	tccaagacaa	ttaaaaaaaaa	aaaagtgttt	1740
ggtgagaatt	gcttgaaccg	ggaggcagag	gttgcagtga	gccaagatcg	tgctactgca	1800
ctccagcctg	gacgatacag	tgatactctg	tctcaaaaaa	g	•	1841

<211> 1955

<212> DNA

<213> Homo sapiens

acactttgcg	ttccgcggcc	ccggcccctt	ggtttcctag	tcctggctcc	attcccctct	60
caggcctagg	gctgggaccc	ctcccgccc	ccggtcttgg	ccctgccccc	ttcaacagac	120
ggtccgcccc	ggcccctccc	cctcgtcccg	cccggccctg	gcaggccccg	cccctgcgg	180
cctctacctt	tgacgtcttc	ccccgggagg	tggcgggggt	ctgcgaccga	atgccggcgg	240
gactctgggt	cagggcttct	ggcgggccct	gcggggggca	gcgaggtgac	cgtgaacctg	300
cggctcatgg	cgcggaaagg	agccaggcgg	ccgcggcaag	gtccgggatc	gcacaagtgg	360
ctgcaaccag	gctctaggag	ggagaaagag	cggatccccc	aacccctcc	gcccgcccgc	420
ccccgcgag	acgcggcgcc	gcgcagggtc	ctagtgcccg	ctgtgcgaag	ggttcctgaa	480
tctggccact	tcgctgggag	gccctgggct	ccccagtgcc	acccgaaggg	cctgaggagg	540
ccatctgcag	aatctcactc	tgtcgcccag	gccggagtgc	agtgtcatga	tcttggctca	600
ctgcaacctc	cgcctcccag	ttcaggagat	tctcctgcct	cagcctcccg	ggtggctggg	660
attacaagca	cagtgcctgg	cacattatcg	gcacttgatg	actgttgtct	aataactgag	720
cttccataca	aaccacctgc	cgtcctgtac	tgaaggagaa	agagcttcca	gccggggagg	780
caggaaatct	gggtcctggt	cttggttgca	tccctgactt	cctaaatgac	ctggagaagg	840
cctctgcctc	tgctgggatc	ttgtctgtgc	tggggcattt	gtttccattt	ccaagggctt	900
tttcttcctc	gctcagaatt	tgaccactca	ctaagaggag	cttagtgtgg	tgtctcacga	960
agggatcctc	ctcagccctc	acctcggtac	tggaagacgt	cgtgcgtgtc	caaaggcacc	1020
ccggggaaca	tccggtccac	ctcgctggcg	ctccggggat	ccaccatctg	cgccttcacg	1080
tcgaacctgc	gggcaggcgc	ggaggagaca	ggtgctgagc	cggctagcgg	acggaccgac	1140
ggcgcccggg	ctcccctgc	cggcggccgc	ggcggcgctc	acctccagag	gcgccgcccg	1200
ctgaacagca	gcatcttccc	cctgccactc	cggagggccc	cggtcacctg	ggccacgtcg	1260
gcgcccaggc	ccagcttgtc	cagacgcctc	gggcccagca	ccgacgcgcc	tgtgtacacc	1320
cacacctggc	gccctgcagg	ggaggagggt	cacgtcggtt	tgggggcgca	gagggagcac	1380
gtactcctag	aacgcgagga	gggagattcc	ggcgaggcct	ttcctagccc	gcgtgcccgc	1440
agtccctgca	acccaggggc	agaggcgctg	ggtagagcga	cgcgagggcg	tggagaggag	1500

1560 ggggcagaaa ctcagccgcc cctacgtttg ctaaactgcg tccgccaggg ggcgtatttt 1620 tctaaaacgc acaagacgtt tcgtgggtta tcgatggtct cttgagcctc cttgactgat 1680 ggggattgac cgggcggggg agggaaagta ggtaactaac cagagaagaa gaaaagcttc 1740 ttggagagcg gctcctcaaa gaccgagtcc agcttgcggg gcagcgcggg ccacttgtcg 1800 gcgataagga aggggccctg cggccggctc cccctgccct cagagaatcg ccagtacttc 1860 ctgagaaagc gaggagggaa aggacgggct ctaagccttg gacacagggc cagtgggcgg 1920 gaagggacgg gcagcccctc cgcaaagccc cctcccgcat ccacacaacc ccgcctcctc 1955 acccatcctt gaacaaatac agctggttcc caatc

<210> 92

<211> 1730

<212> DNA

<213> Homo sapiens

<400> 92

60 cagcagagtc ccagcatggc accttccttg cgtcactcgg tgcagcagtt ccatcaccac 120 ccctctactg ctctccatgg agaatccgtt gcccacagcc ccagattctc cccgaatcct 180 ccccaacaag gggctgttag gccgcaaacc cttaacttta gttctcggag ccagacagtc 240 ccctctccta ctataaacaa ctcagggcag tattctcgat atccttacag taacctaaat 300 cagggattag ttaacaatac agggatgaat caaaatttag gccttacaaa taatactcca 360 atgaatcagt ccgtaccaag ataccccaat gctgtaggat tcccatcaaa cagtggtcaa 420 ggactaatgc accagcagcc catccacccc agtggctcac ttaaccaaat gaacacacaa 480 actatgcatc cttcacagcc tcagggaact tatgcctctc cacctcccat gtcacccatg 540 aaagcaatga gtaatccagc aggcactcct cctccacaag tcaggccggg aagtgctggg 600 ataccaatgg aagttggcag ttatccaaat ataccccatc ctcagccatc tcaccagccc 660 cctggtgcca tgggaatcgg acagaggaat atgggcccca gaaacatgca gcagtctcgt 720 ccatttatag gcatgtcctc ggcaccaagg gaattgactg ggcacatgag gccaaatggt tgtcctggtg ttggccttgg agacccacaa gcaatccagg aacgactgat acctggccaa 780

caacatcctg	gtcaacagcc	atcttttcag	cagttgccaa	cctgtcctcc	actgcagcct	840
cacccgggct	tgcaccacca	gtcttcacct	ccacaccctc	atcaccagcc	ttgggcacag	900
ctccacccat	caccccagaa	cacccgcag	aaagtgcctg	tgcatcagca	ttccccgtcg	960
gagccctttc	tagagaaacc	agtgccggat	atgactcagg	ttagtggacc	gaatgctcaa	1020
ctagtgaaga	gtgatgatta	cctgccatca	atagaacagc	agccacaaca	aaagaagaag	1080
aaaaagaaaa	acaaccacat	tgtagcagag	gatcccagta	aaggttttgg	taaagatgac	1140
ttccctggtg	gggtagataa	ccaagaacta	aataggaact	cactggatgg	gtcccaagaa	1200
gaaaaaaaga	aaaagaaaag	gtcaaaggca	aaaaaagacc	cgaaggaacc	gaaagaaccc	1260
aaggagaaaa	aagagcccaa	ggaacccaag	accccgaaag	cccctaagat	tcccaaagag	1320
ccaaaggaaa	agaaagcaaa	aactgccacg	ccaaaaccca	aatccagcaa	aaagtcaagt	1380
aataagaaac	ctgactcaga	agcaagtgct	ttgaagaaaa	aggtcaacaa	gggaaaaaca	1440
gaaggtcctg	aaaattcaga	cttagacaaa	acacccccac	catctcctcc	tcctgaagaa	1500
gatgaggacc	caggtgttca	gaagagacgg	tccagcagac	aggtgaagag	aaagcgctac	1560
actgaagacc	tggagttcaa	gatttctgat	gaggaggcag	atgatgcaga	tgctgctggg	1620
agggattccc	cctccaacac	ctcccagtca	gaacagcagg	aatctgttga	tgcagaaggc	1680
ccagtggtag	aaaaaattat	gagcagtcgt	tcagtaaaaa	aaaaaaaaac		1730

<211> 2924

<212> DNA

<213> Homo sapiens

<400> 93

aatcctgccc ctcagtcaca ttcttttgt ggcttgatgg cttttattcc tttccgcatt 60 tcctttgtga atattgcttt cttcgttatg cctttatctg gaatgagtga cgattctggg 120 atccttggtt tagcagaaac ctcatgacag aatcttctat acctaggtgg cctcttttag 180 tctctgagca ataaccatgt catccaggtg gaatcacaac catcatttta tatacacgaa 240 gtcctcactt cgttttggaa ttccctgaaa actgacttta tggaaacaat gtacagaagg 300

360 tcctccaaca gcattggttg ttcaaagtcg tgtagttata ctgttgatga aaaataagtg 420 gtttcactgt acataatttt gcttcaaggt gaagtttcca agagactttc aaagatgtta 480 agtgaggaca tactgtacat caaattcata tcctcttcca cagttcatgt ggaatttctt 540 tataaacttc ttctagagaa tctatttagg caggttctgt gtagatatcc atgtcgccgt 600 tecteaatet tggetttgag teaaateace tgggeagett acacatgatg aggactggtt 660 ctcaatatct gagattctga tttccttgca cctgtgtgag tgtgtggatt ttttttttc 720 ttttaaagca ccagagatgg ttccaatgac gaagttttta gaggcatcaa gctgcaatga 780 gtaagaacag aaattaattg taatatgatt tcttcaaata ttatcttcaa atgcattgtc 840 catcaacgcc atacaaatgt ttattatgct gttttttctt accatttcgc attttctatt 900 tccttcttgt ccttttttt ttttttttt tttttttgag tcagagtttc actcttgttg 960 cccaggctgg atttcggtgg cgcggtctcg gctcactgaa acctctgcct cccgtattca 1020 agggattete etgtetegge etteeaggtg getgggattg eaggeatgeg etaceatgee 1080 tggctatctt gttgttgttg ttgttgttgt attgttagta gagacgatgt ttctccattt 1140 tggtcaggct ggtcttgaac tcctgacctc aggtgatccg gccgcttccg cctcccaaag 1200 tactgggatt acacgcatga gggaccgcgc ccagccacca cttagcattt acattttgca 1260 attgttgaag ttatagattt atacacacat caattgctgc tttgttatac acttgcatat 1320 acataagatg ggaaatagaa aagaataaaa tgggcacggt atccctgaag tttcacattc 1380 tgagacttta aaaatatttg ctctttagaa atttgtttca ataaagaaac tgtggtatac 1440 acacccaatg aagtattatt cagcctaaag aggaagaaaa tcctctctgc tgcagacaaa 1500 atggatgtga ttgcaggtct gtatattaaa tgaaataagc caggcacaga atgtcaaata 1560 tttcatgtcc tcacttctac gtaggaagaa aaaaggaaac ctcccagggt gctgggatta 1620 caggcgtgag cgacgcgccc agcccatgct gtaacattat ctgttgtctg ctgttgtttg 1680 tttattttgg agcccagaaa taacttgtca cctgtatgtt caaatgattt ttaacatgag 1740 tggtaagaaa gctcattggt ggaaaaacag ccttttcaag aaatggtgtt ggagaaactt 1800 gatttccaca tgcagaagat tgaaggtgga ccctatgtca caccaggggc aaaaattaac 1860 acaaactgga tcaaagacct caccccaagc gctaaaagaa tcattcgcct aaaggaaaac 1920 attggccatg ctttcatgac atcagattgg gcaatgttct ctgggatgtg acaccaaaag 1980 cataggcaac aaaagaaaat tagattcctt ggattacatc gaaatgacag acacttttgt 2040 gcagcaaaat cacggcaaac tgagtgaaaa gataacccat ggattaggaa aaatattttc

aaagcgtata	tctgaaaaga	ggctgatatc	catcatacat	aaagaacagg	cagaactaaa	2100
caacaagaaa	cccaaagcat	cccatcaaca	atggtcagaa	gactcaagta	gacgtgttcc	2160
taaagaagat	atagcagtgg	ccaataagca	tctaaaatga	tgttcaaaat	cactcatcat	2220
agggaagcgc	aaatcaaacc	aagaatgtga	caccacacat	taggatggat	atgataaaca	2280
aacaggattg	gtgagactag	agggaagtag	gaatgctcga	atctgatcag	agggaatgta	2340
aaaccgtgaa	ggaacgggga	aaatagtatg	gtgtctactg	gaaaaattag	aaacaggatg	2400
atcagatgtt	gccgcagttg	catttgtggg	tacctacaaa	aaagaagcca	ggagtggaag	2460
acagatttgt	gtacacccat	attcatagca	gcattattca	caagagccaa	aatgtggaag	2520
caacccaagg	gttcgtggac	agatgaatga	aaaagcacac	tgcagttcct	tcatacaatg	2580
gaagactatt	cagccttcaa	aaggcaggca	cttctggccg	gtgcggtggt	tcacgcctgt	2640
aatcgcagcg	tcttggagga	ccgaggtggg	cggatcacct	gaggtcagga	gttcaagacc	2700
agcctggcca	tcttggggaa	accctgtccc	tactgaaaat	gcaaaaaaatg	agatgagcat	2760
ggaggcgtgt	gcctgtagtc	ccagctactc	gggaggatgt	ggcacaagaa	tcactggaac	2820
ccgggaagcg	gaggtgagcc	cagattgtgc	cactgtactc	cagcctgtgc	gacagagtga	2880
gactccatgg	aaacacaaaa	caaaacaaag	tcaaacgaac	aaac		2924

<211> 2617

<212> DNA

<213> Homo sapiens

ggtcgcgagg	ctgaggcggg	agaatcacca	gaaggtggag	gttgcagtga	gccgggattg	60
cgccactgca	ctccagcctg	ggcaacagag	gagactctgt	ctcaaaaaaaa	acaaaaacag	120
ataacaaaaa	acagtgactg	tcctctagag	accaagctta	ggcggcctgc	ccggtgttac	180
acagggccat	agctcagact	ttaatgtcca	ggctgaatgg	tttcaaaggc	cttatcattc	240
ttgctactca	cagcagcgac	ccctcagcc	tgagctacac	gttagaatca	tgaccggaaa	300
tgagtttaaa	acaaagaccc	gtgcctggac	cccactctcg	gaacaatgaa	aaaagatgct	360

420 ttgggagtgg ggtgtgtgtt ttggggtttc cgacaagttc ccgggtgact gcatcgtgca 480 gccacagtca aggaccagca caccaggatc actectete cecacagtat gctacggage 540 actcagtgtt acaagtttaa tcgctgtcac caaggacaga acccagacaa tctgggtgac 600 tctaggggct gatgaacagg tgcctgggag aaagggtttg ggatcagaag acctggggtg 660 tgaccttcta caaatagtaa ttggtctggc cttgagtaca tgggaacaga gggagcttga 720 ggccagtcca gcctgtctcg ggtggaaggc aggattccca ttcgcagccg gctggctccc 780 ctttctcacc ttgagcctcc agagctacaa cacgtaaatt agcttagcaa tgcctagctg 840 gcaatgcaca cttgaggagg gtgagaaaca tcgcgatccc aggtgagtgg cgctcttccc 900 ttccgcttgt tgtggcagcc cagcccggac tgctggctgg aacctcgctt gcaggtggaa 960 acatgeggea geeeggetge ttetaggget eetggetggg agaceeeet gteteeetet 1020 cttctaaagg gaaaaacatg aaaaacacag ctactgaggg acatgtttct tcctctgtga 1080 ttagacacag gcaattgaaa gtagccactg gcttctctgg ccacacccac tgctgtcccg 1140 atgtgttttc ccatctcttc catttggcgg ccttcctctt cacctgtttc tctactcagc 1200 tgtggcagaa ggggaaacaa ggttgttgag tgcccttcat gtgccagata ctgcacatac 1260 ccacagagga gaaactgagg ctatgagagg ctaagggact tgcccaaggt cccgagggtg 1320 caaactcctg gcacggagtc ctaaatcctc agcttttctg aagctagggt ccttgttctt 1380 ctttgcccag ttagacatct attgctcctt aacatatcct agatgtgctc ttgtcccac cccactagtc ccattgcttt gggacatttt gcttcattca ctatccacga tcaattctag 1440 tgacccacct gtctctgtga catcactcaa aacacaagag cctcaaagtc acttgcccc 1500 1560 ttctgcctag caagtctttt tttttggaca gggtcttgtt ctgttgtctt ggctggagtg 1620 cactggcgcg acctaggctc actgcagccc ccgcctccca ggttcaagtg atcctcccgc 1680 ctcggcctct caaatggctg ggactatagg tgtgcgccac cacgctcggc tagtttgttt 1740 gtttggtgga gacaacgcct cactatgttg ctcaggctgg tctcgggctc cttggctcaa 1800 gcaatcctcc ccgctcggct tcccgaagtg ctgggattac aggcgtgggc caccgagcct 1860 ggcctaagtc tttctttaca acagatgacc tcaccacttc actctggttt tcagcaagat 1920 cctttattta tcttctgttc cccagacatg tcacatgaat gcaggtagct aggtacctgc 1980 gcgggctgtt ggttttgtaa acgcagagca gagcagtcac gatgtgtaga aatcatgcac 2040 ctcagtgatt ctttaacaag ataatgagta aaaagacttc aggtatgttt gaaatgtctg 2100 ccttttcctg cattctcatc actgacaaat atctgtgtag acattttact caaatgtaga

2160 cgtgctcttt gcacacttgc tagtacctgc ctggtgcatt tcaactgtgt tttcttccaa 2220 cagttgtacc tcttagaagc tgctgttttc catttggatc taaacactgg acctgcacct 2280 gcgaccagct gtatattcca aaccactcct cggctttata aatctgacac tgctcataat 2340 acattattca gaaaaggcat ctctagtgtg gctggccggc tacgctttca cacatcagct 2400 aacacaagct atttctagag tgagtgcctc aaactggtct cctgggacct tttccttcgg 2460 gaagagatcc acatgttctt cacaggagac cagaaaacca gcacaacggc cacgggtcct 2520 ctgggcatgt aggtcttctc tgtctcctca ctagcacaca ctggcttggg tcattgtcac 2580 gcagtgcaca cctttgtgcc atgacaaaga cacagggcca actcttccac tatctccaag 2617 tctagtgttt gaacatttat gtacagacaa ataaatg

<210> 95

<211> 2472

<212> DNA

<213> Homo sapiens

<400> 95

60 agccagcttg gacagccacc tgcaccggat gttgcacagg gactcaacca tcagcaatga 120 gtcctcccag agctgcagtt cgggccgcca gaacatccgc ctgcacagcg actccagcag 180 cagcacacag gtgtttgagt ctgtggatga ggtggagcag gtggaggctg aaggcagatt 240 ggaggagaaa cagcccaaga tccccaatgg gaacctagtg aacggcactt gttccccaga 300 ctcgggtcat ccttcctccc ataacttctc ctcgggcctc tcagagcact cagagcccag 360 tctgagcaca gaagacagtg tcttggacgc ccagcggaac acccccacgg tgctgcgacc 420 tagggatggc agcgtggatg acaggcagag cagcgaggcc accacatctc aggatgaggc 480 tccccgggag gagctggccg tgcaggacag cctggagagt gacctcctgg ccaacgagag 540 catggacgag ttcatgtcca tcacgggcag cctggacatg gccctgcctg aaaaggacga 600 tgttgtgatg gagggctgga ggagcagcga gacagagaaa catggccagg cggacagtga ggacaacctc tcggaggagc ctgagatgga aagtctcttc cctgccctgg cttctctggc 660 720 tgtgactact tctgccaacg aggtgtcccc tgtgtcttcc agcggcgtca cctactctcc

780 agagetgetg gatetgtaca eggtgaacet geacegeate gagaaggatg tgeagaggtg 840 cgaccgcaac tactggtact tcacgcccgc caacttggag aagctgcgta acatcatgtg 900 cagctacatc tggcagcaca ttgagatcgg ctatgtccag ggcatgtgtg atcttctggc 960 tecactgetg gteattetgg atgatgagge cettgeette agetgettea eggageteat 1020 gaagaggatg aaccagaact tccccacgg aggcgccatg gacacgcact ttgcaaacat 1080 gagatcgttg atccagatcc tggactcaga gctgtttgag ctgatgcatc agaacgggga 1140 ctatactcac ttctacttct gctaccgctg gttcctgctg gatttcaagc gagaactcgt 1200 ctatgatgac gtcttcttgg tctgggagac catctgggca gccaaacacg tctcctctgc 1260 gcactacgtc ctgttcattg cgctggctct ggtggaagtc taccgtgaca tcattttgga 1320 gaacaacatg gatttcacag acatcatcaa attctttaat gaaatggctg agcgacacaa 1380 caccaagcaa gtcctgaagc tggcgcggga cctcgtgtac aaggtgcaga ctctgattga 1440 gaacaagtga ggggcacctc accccggcag cctcagccaa gctgcccctg ccccgctcct 1500 ctgcttactt ttcctctgg ctggatgggc accccgggag cggggtcctg gtgtctgttc 1560 acaagcgtgg agttcagtgc gcaaagaaac taccctgact tttacttctg ggcagatggg 1620 gtggagggag taccccttca attcagcctt acattttcct gtttgaccaa agattgccca 1680 agtctggcgt tcctcccttg caggaggtgg aggttgttgg tggaggagga gccatctttg 1740 tttgctggtg cccggaatgg tctcctcttc ttctttccct atccctccaa actgtcttgt 1800 aagatgagac ctggggagga aacttctttt tggaaattgg tgtagaagag gtgtgtgggg ctacctctat gctcctctgc aaggggcctt tggcgatgtt ctggacatgg ctgaagattg 1860 1920 acttagagat tgaccctcca cctcgacatt actgacattt ggggccaggt gattcttttt 1980 gaggggactg teccetgeat tgtaggatge tgageageat eeegggeete accagatgee 2040 agtagtgcca tcccccaacc atacccctgg ttgtgacagc ccccaaaaat gtctctagac 2100 attgcgaaat gttccctgca gggcaaaatt gcccccattt gagaaccact ggcttggaga 2160 agggactaca aatgtacttc ctcccccatt cttttgacgc taagccaccc tggtcctgac 2220 gcctcccctc acttagaaaa ggcatacagg aggccgggca tggtggctca cacctgtaat 2280 cccagcactt tgggaggcta aggtgggcgg atcacaaggt caggagtttt gagaccagcc tggccaacat ggtgaaaccc catctctact aaaaatacaa aaattagctg ggtgtggtgg 2340 2400 cgggtgcctg taatcccagc tacttgggag gctgaggcag gagaatcact tgaacctggg 2460 aggtggaggt tgcagtgagt tgagatcacg ccactgcact ccagcccggg cgacagttca

agactccatc tc 2472

<210> 96

<211> 2388

<212> DNA

<213> Homo sapiens

<400> 96

60 agtcacataa ggctagtggc tattgtgttg gcggtaatgc tttagagaga aatagggtat 120 gcacctgtgg cactggaaag aggttctttc attttcttat gggtacgact tcataccctg 180 gaaattetet geaaattgtg tggetgettg geaacttgga gatgteetgt ceaagteeae 240 ctttgactct gagccttgat ctggtgacat tgctgaggta gaggaaaggt gagaaatatt 300. cctctgaagc agagaacacc ctccccgtca gcctttgcca ctcggcatgg gaggcctgag 360 gcaatgagca ggcaaggcac tgggtcctca gcgcagggcc tccccgtgct ccttgggtgc 420 cttcccactg ctgactctgt ccctctggac tgtctcttgc agaaattcct gctactcatg gccagcacct cggcctgcta caagctcttc cgagagaagc agaaggacgg ccatggagag 480 540 gccatcatgt tcaaaggctt gggtgggatg agcagcaagc gaatcaccat caacaagatt 600 ctgtccaacg agagecttgt geaggataac ctgtacttec agegetgeet agactggaac 660 cgtgacatcc tcaagaagga gctgggactg acagagcagg acatcattga cctgcccgct 720 ctgttcaaga tggacgagga ccaccgtgcc agagccttct tcccaaacat ggtgaacatg 780 atcgtgctgg acaaggacct gggcatcccc aagccattcg ggccacaggt tgaggagaa 840 tgctgcctgg agatgcacgt gcgtggcctc ctggagcccc tgggcctcga atgcaccttc 900 ategacgaca tttctgccta ccacaaattt ctgggggaag tccactgtgg caccaacgtc 960 cgcaggaagc ccttcacctt caagtggtgg cacatggtgc cctgacctgc caggggccct 1020 ggcgtttgcc tccttcgctt agttctccag accctccctc acacgcccag agccttctgc 1080 tgacatggac tggacagccc cgctgggaga cctttgggac gtggggtgga atttggggta 1140 tetgtgeett geeeteetg agaggggeet eagtgteete tgaageeate eecagtgage 1200 ctcgactctg tccctgctga aaatagctgg gccagtgtct ctgtagccct gacataagga

1260 acagaacaca acaaaacaca gcaaaccatg tgcccaaact gctccccaaa gaattttgag 1320 tctctaatct gacactgaat gaggggagaa gggaaggaga ttctgggatt gccagttctt 1380 ccagcagcca tgctctgaaa atcaaggtag aatccatgga aagggacccc aggaccccgg 1440 gaccctagac gtatcttgaa ctgccatcgt catttcaaat acatctccct cagggtttcc 1500 aggtggccac ccccaattat tcattcctta ccaacctctc aaatcctctt ggctttctct 1560 ctgcagtgtg gacactgttg gctagtcctc cccactccct gagggtccag taagttagct 1620 tagaaccttc ctggaaacat ttcatctgag caggtttccc cacgtgtggg atgctccttt 1680 tgcctcatct gtctcaggga tgcaggctcc cccgcatgca tgggggatttc tccccagacc 1740 agcatacttg tgacctgaga gttcaatgcg taaagatgcc cctggtcagc catatccatc 1800 ttctcttgcc tggtccttga ttctctggcc gctccctgac cttcctcctt ccactgcctt 1860 gactttcttc ctttttattc ctggtgccat ctgtccaggc agctagacaa gaacttgttc 1920 gccagcagcc agattcaggc cttcccaggg gcataataag tgaccagccc ctcctcccg 1980 gacatcagat ccaacacata aggaccctgg cctaccctcc agcccaacag ccagttctgg 2040 gtcagctgcc aacttagggg tggtttgatt atcccattga aattcaccag tgcctttgcc aaagaccctc tcatttggac atacccagat tcattccctg gctccaactg aaaagactca 2100 2160 gtttcaatcg ttaaaagttc ctttagggcc agaagaataa atgaattata atcccatttg aagaaccgat ttataaccaa tgaaaaggtt ataatgtaat ttatattctt ggaggaacaa 2220 2280 gattttcatt tgggattatt tccttcaacc attcaacaaa catttgttgt atgccactaa gegecaggea eggegttggg etetgeaaac acagtggtta gtageagtet ggacetggte 2340 2388 cctactggca tggaacccat cactccccaa catgcaaagc ccacattt

<210> 97

<211> 1725

<212> DNA

<213> Homo sapiens

<400> 97

ttgagtgagc ttggctatcc tctttagctc ttctttcgaa cctttggccg aaggctccaa 60

120 ccctcccaaa ggcagaaggg agcttaattt gtcctgaaat ggatgggaca agtgtgcagg 180 cactaggtgg gatgggagct ttatctcagt ttgggaggag agggaactca gggccagggc 240 cagcgattgt acagtcccac tcagagggcg gagtggctgg aggctgaccc ttctcccagg 300 gagcaggcgc tggatggacc ctgacactgg ggagaatgaa aggaaaattg tatcatgcct 360 attgtgtgcc aggcagagct agcagttccc ctttcatctg ggcaatgtcc cgggcgggtg 420 atgtcagttc ctcattgtgc agacaaggaa actgagacct ggggcccatc ccatccacga 480 teagggeeca ggeageteeg acteaatgtt eagtgetete tgeaggegte egggeaettg 540 ccatgcagag cagtgaccaa ggatcacaga tgcagtgggc cgggggggga tggcagaaaa 600 caaagggtta gggtacccgg atgccaggtt ctcagtgctg gtgtcctcac aactggctat 660 ccctatgccc ctgctgtcct cagtgggtgg acactggacc tggactgacc cctgggacag 720 gaggattcaa ggtgtcttgt tctcttttga tttcttttat cttttctctg ccaggaaaga 780 tactgatctc tgttcttggt taagttccaa gaaccatcta agtttcgtgc ccctcagctg 840 taaaagggaa gtacatttca tttgtttatt ctgtaaaact ctcggtgtgt gccatggcca 900 tgcactgatg atgagcacat gtgtgcggcc cctgccccg tggagcgcat gcatggtcct 960 ccagccagag accgcgctgg gagaaatcag gggttcactc ctggtcggag gtgagcatct 1020 gcctctgcat gcaggaaggc atctcatgaa accccaaagg cctggcagcc cctgcacatg 1080 gaaggagtca ctctcctcca tgtggggtga gccacgctgg ccttgtggca ttcacgtgtt ccctccacct gcttctccag cgtgaagggg acctcaatgt cctctgatga ccttcttgaa 1140 gagagacatt teetteette attggagget ttagaeggag eeagtgaeag eteagetetg 1200 1260 gctgtttccc atctgtgaaa tgggaagagg gaggatggca cgagtccctt gccctcacca 1320 aactggccgc tagagagagg aaagatgttt ccattctgat ccccactcac ctccacccca 1380 tccttccagg cttctgatcc tcattgtaat tttggagcta tttggtgata ttgtctttgt cettggatee gaggettete etaccaacte attgttttt caaegtgaca aaataaaage 1440 1500 cctgagctgg gcgcggtggc tcacgcctgt aatcccagca ctttgggagg ccgaggcagg 1560 tggatgacga ggtcaggagt tcaagaccag cctgaccaac atggtgaaac cccgtctcta ctaaaaatac aaaaaattag ctgggcatgg tggcatgcac ctgtaatccc agctactcag 1620 1680 gaggctgagg caggagaatc gcttgaaccc gggagccgga ggttgcagtg agtcgagatc 1725 atgccactgc actccagcct gggcaacaag agtgagactc catct

<211> 2609

<212> DNA

<213> Homo sapiens

cctgcccctg	cctgatggcc	aaggccgacc	ccacctgcaa	cagcaccttc	ctccacctgg	60
acacccaggg	ctgctactca	gggccctgcc	cagaggagtg	tgtgtggagc	agctggagca	120
gctggacgcg	ctgctcttgc	cgggtgctgg	tgcagcagcg	ctaccgacac	cagggcccgg	180
cgtcccgagg	ggccagggca	ggcgccccct	gcacgcggct	ggatggccac	ttccggcctt	240
gccttatcag	caactgctct	gaggacagct	gcacgcctcc	ctttgagttc	catgcctgcg	300
gctcccctg	tgctgggctc	tgtgccacac	acctgagcca	tcagctctgc	caggacctgc	360
caccctgcca	gccgggctgc	tactgcccca	aggggctgct	ggagcaggct	gggggctgca	420
ttccccaga	ggagtgtaac	tgctggcata	cctcagcagc	aggagccggg	atgaccctgg	480
ccctgggga	ccgcctgcag	ctgggctgta	aggagtgtga	atgccagcgt	ggggagctgc	540
actgcaccag	ccagggctgt	caaggtcttc	tgcctctgag	tgagtggtcc	gagtggtcgc	600
cctgtgggcc	ctgcctgccg	cccagtgccc	tggcccctgc	ctccaggact	gccctagagg	660
agcactggct	ccgagaccca	actggcctct	ccccacctt	ggccccgctg	ctggcttcag	720
agcagcaccg	ccaccggctc	tgtctggatc	ctgcgacagg	gaggccctgg	actggagccc	780
ctcacctctg	caccgcaccc	ctcagccagc	agcgcctctg	ccctgaccct	ggagcctgcc	840
ctgactcatg	ccagtggagt	ctgtgggggc	catggagccc	ctgccaggtg	ccctgcagtg	900
gggggttcag	gctacgctgg	agagaggcag	aggccctctg	tggaggaggc	ttccgggagc	960
catgggctca	agacagaaag	ctgcaacgga	gggccctgcc	caggtgagag	ctgcgaggcc	1020
caagacactg	tattcaccct	ggactgtgcc	aaccagtgcc	cacacagctg	tgccgacctc	1080
tgggaccgcg	ttcagtgtct	gcagggaccc	tgccgcccag	gctgccgctg	tcccctggc	1140
cagctggtcc	aggatgggcg	ctgtgtgccg	atctcctctt	gccgctgtgg	cctcccagt	1200
gccaatgcct	cttgggagct	ggccccggcc	caggcggtgc	agctggactg	ccaaaactgc	1260
acctgtgtca	acgagtccct	ggtgtgccca	caccaggagt	gtccagtcct	tgggccttgg	1320

1380 tcagcctgga gcagttgctc ggcccctgt ggtgggggca ctatggagcg acgtcggact 1440 tgtgaggggg gtcctggggt ggcaccatgc caggcccagg acacagagca acggcaggag 1500 tgtaacctgc agccctgccc tgagtgcccc cctggccagg tgcttagtgc ctgtgccacc 1560 tcatgcccgt gcctctgctg gcatctgcag cctggtgcca tctgtgtgca ggagccctgc 1620 cagcctggct gtggctgccc tggagggcag ctgctgcaca atggcacgtg tgtgcctccc 1680 actgcctgcc cctgcaccca gcattctctg ccctggggcc tcaccctgac cctggaagag 1740 caggeceagg agetgeeece agggactgtg cteaecegga aetgeaeceg etgtgtetge cacggtggag ccttcagctg ctccctcgtt gactgtcagg agtgccccct ggggaaacgt 1800 1860 ggcagcaggt ggccccgggg gagctggggc tctgcgagca gacgtgcctg gagatgaacg 1920 ccacaaagac ccagagtaac tgcagttcag ctcgagcctc gggctgcgtg tgccagcccg 1980 ggcacttccg cagccaggca ggccctgcg tccccgaaga ccactgcgag tgctggcacc 2040 ttgggcgtcc ccacctgcct ggatctgaat ggcaggaggc ctgtgagagc tgcctctgcc 2100 tcagtgggag gcctgtctgc acccagcact gctccccact cacctgtgct cagggcgagg agatggtgct ggagccaggg agctgctgtc cctcttgccg cagggaggct ccggaggagc 2160 2220 agtcgccctc ctgccagctc ctcacggagc tttgaaactt caccaaaggg acctgttacc tggaccaggt agaagtgagc tactgcagtg ggtactgccc atccagcacc catgtcatgc 2280 2340 cagaggagcc atacctgcag agccagtgtg actgctgcag ctaccgtcta gacccggaga 2400 gccctgtgcg gatcctgaac ctgcgctgtc tgggtggcca cacagagccc gtggtgctgc 2460 cggtcatcca cagctgccag tgcagctcct gccagggagg tgacttctca aagcgctaac 2520 aggeteeget gggtgagtee acagetgtee etettgtgat catgggacte ageageactg 2580 accacgteet tecacgetet etcacetgee eccaaetggg ggeecatgae ttggeattag 2609 catgttccaa ataaagtgat actggcaac

<210> 99

<211> 1643

<212> DNA

<213> Homo sapiens

gcttcaaggc	agtgctcttc	ctcactgggt	tgctgtttgg	ctcgggggtc	atcttcctcc	60
tctgctaccg	agagcgggtg	ctagagacac	agctgagtgc	tggggcgagc	gcgggcatcg	120
ctctgggcat	cgggctgctc	tgcgggctgg	tggccatgct	agtgcgcagc	gtgggcctct	180
tcctggtggg	gctgctgctc	ggcctgctgc	tcgcagctgc	tgccctgctg	ggctccgcac	240
cctactacca	gccaggctcc	gtgtggggtc	cactggggct	gttgctgggg	ggcggcctgc	300
tctgtgccct	gctcactctg	cgctggcccc	gcccactcac	caccctggcc	accgccgtga	360
ctggtgctgc	gctgatcgcc	actgccgctg	actacttcgc	cgagctgcta	ctgctggggc	420
gctacgtggt	ggagcgactc	cgggctgctc	ctgtgccccc	actctgctgg	cgaagctggg	480
ccctgctggc	actctggccc	ctgctcagcc	tgatgggcgt	tctggtgcag	tggagggtga	540
cagctgaggg	ggactcccac	acggaagtgg	tcatcagccg	gcagcgccga	cgcgtgcaac	600
tgatgcggat	tcggcagcag	gaagatcgca	aggagaaaag	gcggaaaaag	agacctcctc	660
gggctcccct	cagaggtccc	cgggctcctc	ccaggcctgg	gccaccagat	cctgcttatc	720
ggcgcaggcc	agtgcccatc	aaacgcttca	atggagacgt	cctctccccg	agctatatcc	780
agagcttccg	agaccggcag	accgggagct	ccctgagctc	cttcatggcc	tcacccacag	840
atgcggacta	tgagtatggg	tcccggggac	ctctgacagc	ctgctcaggc	ccccagtgc	900
gggtatagcc	atatctgtct	gtctagactc	tgcagtcacc	agctctgcca	gctcgaggag	960
gcctgctagg	ctgccactca	gcctcctggc	tttggctgtc	cctctcccca	gcctggagag	1020
ggctggcctg	gtcactagaa	gggaggattg	tctcaggcga	gtcttggcct	gagaggaaag	1080
cccctccca	agctcccaag	aggctcctga	ggaactcggg	gtgtgaaccc	cattggggtg	1140
tgctcagggt	tgtgagtgtg	ttgcccgtgt	gtctgtgtgt	atgtgtgtgg	gggtgggcag	1200
gcttggaggg	gacgctggga	cccttgcctt	agatttctga	ctggtagggt	ttctccaggc	1260
tcagccccac	ctcttcactc	cctgccaagg	tcccatgggc	cacctcctgc	atgtctccgc	1320
ggaggggcta	ccttccttcc	catcgccctg	cctcgcagcc	agactcatct	aagggttctt	1380
gtccttgtct	atggggcaaa	ctgtagcatc	cctcaccctg	gtcccctggc	ctctgtaaag	1440
ccaccagcct	gagggcagtg	gcaggagatg	ggggtggggg	ggtgctgctc	tgggctgggt	1500
tgggaaggga	gttggggagg	ggtttaaatg	cacggtgcat	gtctggtgtc	tgtcatgcca	1560
acctagacac	ctcatgcttc	tgtctcccc	accccactct	gttttacatc	ttttataaat	1620
gtgccaaact	gtgtggcctc	tgc				1643

<211> 2347

<212> DNA

<213> Homo sapiens

<400> 100

60 gcaggagat ggggctgtct ggggtatggg caggtattag gatttcgctg atgaacagag 120 agagcagcag gaaggcagtg gcacagaagt gtggttggta gggctgagga tggaatccca 180 gaggetttgt gggtgaatgg aggtggaaaa gecaggetga aaggetgaea etcagggaga 240 gagggcagga caatctgtga ccaacaggga gggtctttga caagagggca cttggaggtg 300 ctgcattgat gagcatctgg aattagcacc aggagaataa agagccaatg ctcctggacc 360 atggacagag gctgggaaac cccttgggaa agtggccaca ttgcacaagg ccggccaagg 420 ctgacagcag tgagtggggc caggtttgtc aaagcagcca gagggggatg aagtccaagt 480 tggcacgtgc caggccccac caagggggag gccaagctga gcagcatcgg tcatcagctc 540 agtacagctg cttgaggtag gaggttgggg ccagtgatcc cagaggcaga ccaggaagca 600 aagccacagg caacatggag ctggggagtg ggtcagggat caccctctag tgctggagta 660 cagaccggc tggtggagga aggggaggaa ctggagcttg aggcaatggc agtggccaga 720 ggggtggtct tcagcctggt cagggggact gtgattctga agcagaatca ccctggctct 780 gagaaagttg gtcgtggccc ggaaggactc atgagaagaa gagtaaacag agtggacttc 840 tgacatcgag gctgagcttg tttggatgtt aaggaccctt ttgatggttg gcatctagaa 900 aattatgtct ttagagatgc tgcagcagct ccaagagagt atccttgcag ggcccagggt 960 ggtgcagcct cagagagacg gggtgagggt cattccgaat agctgacctg agagtcttta 1020 agagagtcac tttaccagca ggagtgaaca ctgtgtgagg agtcaggaga tacggctcac cctcttgact ctacaggctg tcagaagggg cccggagtcc tgtctactct gccagccagt 1080 ctcctgagtg gtgtgggtat gcatgggctt cgggaacagt ttagtcatcc tcgttggcct 1140 1200 gecagectet geetetgett tecagecete aegecegatg tegtgeacea gteetette 1260 atgtcagccc tgtcggccca ccctgaccgc tcactctcag tgtgctggga gcagcactgc

aagctcctgc	caggagtagc	gggcatctca	gcctcgacag	tcgccaagtg	gaccatcgat	1320
gaggtcttcg	gctttgttca	gaccctgaca	ggttgtgagg	accaagcacg	cctcttcaaa	1380
gacgaggcaa	gaatagtcag	agtgacccat	gtatctggga	agactctagt	ctggactgtg	1440
gcccagcttg	gggaccttgt	gtgctcagat	catcttcagg	aaggaaaagg	catcctggag	1500
acaggagtcc	attcactcct	ctgctctcta	cccactcatt	tgcttgccaa	acttagcttt	1560
gccagtgata	gtcaatatta	aagtgtactt	ttttcccctt	taatccaata	tagttgataa	1620
ttaaagtgta	ttttgaatga	cacagatatt	gtgatttact	gcaaggatcc	taacacacac	1680
ttaaaatcaa	gagccaagga	gtagtgagtt	gtagataaaa	aaagaatgtc	agctttggag	1740
acagtctggg	tttaaatccc	agttctgtca	atttgagctg	tttactgtct	ctgagcctac	1800
atcttcttgt	ctgtaaaatg	gagataaaat	gggtttaatg	aggtctacct	tgcagagcca	1860
ttgtgagcat	tggaaatgat	gaatgaatca	taccagaacg	tctagtataa	ttacagtcat	1920
gcattgctta	acgatgggga	tacattctta	gaaatgtgtc	actaggcaat	tctgtcattg	1980
tgtaaacatt	atagaatgta	cttacacaaa	cctagatgtt	atatgtattt	ttatttacat	2040
gtatattttc	acatgaaata	ccaaatgtca	cagcattatt	actgaatgtc	agtcatttcc	2100
cctacttgat	ctgcaatgcc	aatatcaagg	gccatgtatc	aggtttctgt	atatgttcca	2160
ctataatctt	atgggaccat	ggttttaaat	gtggaatcat	tgacagaaat	gtctttatgt	2220
agcatatggc	tgtgtatcac	tagtatataa	tagagcaata	ttatggagga	atatgtagat	2280
ccaatcactt	tacctataca	aaatgactgc	tatggtggga	acacaataaa	caccagtttt	2340
gactttt						2347

<211> 1947

<212> DNA

<213> Homo sapiens

<400> 101

agagectgtt tgegeagtae eeeggaggg eggaaggeeg eeggaggaaa eageaagtga 60 cagageagag gaaeggetgg eeeageeaat eetggagetg etgttgeage aettgtteee 120

180 caaacaagtg ctcctacatt ctggtaggag gacagagagg agggggctac tggtccacac 240 ccctccctg ccgaggaccc catggctgct cccctgcagg aaaggcagct aggctgcctt 300 aggccggatg ggcagaggct gccatggccc agggtggtga cggttttgcg gcccctccgt 360 gctgcccaga gtgggaagaa gagcgcagag cctggcaagt ttctctctgt gtcctctggg 420 ctggaaggag caggtataga cagggccgag gcagccaggg cctggtgctg ctttggcatt 480 ggtggcagga gggctgaacc tccagcccct tgggtttggt tccacccctg gcctgtccct 540 ggcactcgac aactgctcct gtgtgcttat tggtgccacc atgttatata acgcttatat 600 aatcttccag ggcgagcact gtgtctccgc tctcaggtca cgcagacacg gtgtccgtgt 660 gggaggcagg atctgtggaa gcctgtgggt gaacctactc ccccgatccc caacctggct 720 ccttctcctg atctcagcca taggaggggg gctgggagag ccaggtccct ctccacacca 780 gctgtgtggg atgagaacac ggttggctgg gcagttttcc tcaccttcct gccccactag 840 teceaettge cetgtetggt agageagatg ceateettgt getttgatae eagetetttg 900 ttttggggga cccctggcat ggcaggtggc atggcgagat gaaccccaaa atgttgcagt 960 ggaagaacac atggtactta gggttggata aagagaggga gaaattagct ctgcctttga 1020 ggagcaaggg taactagaag gatggtggtg gcattataag agatttggag caggcctggg 1080 gctaggggat ggtcagggaa gggtgtacag ggaagtagat cagacagcaa agataaacat 1140 ggtgttcttt tactgtactc tccactgggc tgtccctggt taccggggca acagaagcag 1200 tgatgaaaat catgcctttc gttcagtgga aaaatttggc tcctcctccc ggctcttcct 1260 tctctaaatc gcctgtgacc cattgagagg gttatgcttc caaggatcag agagagaccc cagcatgttt tcatcatgct cccctttccc cagtcttctt tatcatctcc cctcttcctg 1320 1380 catcccctgt ctcccccac agctcggcag ttggcagttg cgtaggagtt ggagtagatg 1440 cagggggaag ggcatggacg tcatcacagg gcagggtgag cagagcgtgg gcagagatgt 1500 ggatgcagga atgcctggca catgaggagg gtccagcatt gatgagctag atggagccaa 1560 aagcctgttt ctgggctggt aggagctgag gtgggcaggg tgagatgatg gtgggccttc 1620 agagttcagc agtctgggtt cgagggagta ggaactagga agggcctgag gtttcttgtg 1680 cagatatett gtgatgaaaa etaceaaace gtateeettt ttgaagttaa gatttttgtt 1740 aagttttttc tttcatcttg tgatgaaaac cgtgattcat tcattcagca tttattgtgt gcccccata ttaggtgagg ttctgggaac tgggaagccg aaggtgagta gcactggacc 1800 ttgaccttga agagactgtg gtgaatggaa ggaggatgag tatatggggg aagatctggc 1860 attgttgcaa gcctggaatc tggggtcccc agcaggagac tagcaacata ccagatcgga 1920 ggtgataggt tagggtggag cgtgtgg 1947

<210> 102

<211> 3122

<212> DNA

<213> Homo sapiens

60	cggcagggac	gagcgcaacg	cgaccaacgt	ttggaagcac	gggttagcgc	actagaggtg
120	ttggggcacg	actgctcgct	attgccagtc	agcccctcgg	ggcggcgccc	acctgacccc
180	gggagtcagt	gacagggtcc	tcctgtcgcc	gcacccgacg	gtcctgcggg	gaggtgccca
240	ccgcttttta	ggagcctggc	aaactccgcg	tcacaggcaa	tctagtccca	atagctgggt
300	agcgctaaca	ggatctcccg	agaacgggtt	tccgtaaaat	agtttcccca	cctgggcctc
360	gtgacctccc	ccacccacac	gagggatggg	gaaggggagg	cggatggggc	ttccagaact
420	gacgagcggg	ctccggccgg	ggggtggcag	actgatccag	cccgcctacc	cgcgtggagc
480	gcggagcgcg	agcgcctaag	cgcccttggc	cctacccggc	cctaggaaac	gtgggcgggt
540	ccgcaccctc	aggatgggga	gcacccacgg	cccggagttg	gcctgcttgc	cggctctgca
600	tgtgactcgg	agacacgacg	ggcggtgcag	tggaggccag	ggagccaccg	agcttcgcag
660	ccctctgcgc	taacggggct	gggggaccgc	acgagggagc	gggaggatgg	agtgcgcctg
720	gttggcggta	ctccgtggac	cccgggcggg	cgtcgagggt	cagaggcgca	gccccgtccg
780	ggccgggatg	cgcggcccaa	gttcgtgccg	catgaagagc	agtcacggac	gcgccgagcg
840	ggccgggccc	gggcgcgggc	ggaggctaac	gcgctgaggg	acatcctgcc	ggggttagcc
900	gggctcaaca	gctgctggac	agtgcaaggc	gcgagggagg	caccgcgatg	agccggagcc
960	gactcgcaga	tggctcggcg	tgaccgtcgg	cacctggtgc	gtgctaccac	agacgactgc
1020	gtgtccacct	ggagctggcg	agaaggcgca	aagacgcgcc	ggagctgcaa	acctgcggca
1080	cgcgccgagt	cgccgacgag	ggggcctggc	ctgcgcgacc	gactgctgtg	gcgcccggct
1140	gacatgcgac	gctggaagcg	gcctggacct	ttctcgggct	ctgggtggcc	tcgagcggct

1200 gctcgctgga gctgggcgcc gcgttcccgc tgcacgcgcc gcggcgaccg ctggtgcgca 1260 caggtgtggc tggcgcctcc tccggcgtgg cggcgcgcg gctgagcacc cgcagcctgc 1320 ggctcgaggc ggagggcgac ttcgacgtcg cggacctgcg ggagctggag cgcgaggtcc 1380 ttcaggtggg cgagatgatc gacaacatgg agatgaaggt caacgtgccc cgctggaccg 1440 tgcaagcccg gcaggcggcg ggcgccgagc tcctgtccac ggtcagcgcc ggcccctcct 1500 cggtcgtgtc cttgcaggag cgcggggggg gttgcgaccc caggaaggcc ctggccgcca 1560 tccttttcgg cgccgtgctg ctggcggctg tggccctagc cgtgtgcgtg gcgaagctga gctgacagac acccgacggc cgcctgctgc tgccgctccc tcccctgaga aaagactcgg 1620 1680 gatgggtgtg gggtctggcc tgtgcaaggg gagtggtcct aaaaccccgt gtgtgcatgg 1740 gtacacgcgc gtttccagtg cacatctgcc tgggcaggac acggttttcc tcttgctggc 1800 ccgggagaag ttaactttgc gccggccgtc agggcattac cgctaacgtc tgcaggagct 1860 ttattcccta ttaatagaaa accgtcacag tgaccctaga tccctccgag ttaatgagtt 1920 aacacatgtg ctgttggggc gtctttacag ggagtccgag ttcggtgccc acccctgcca 1980 gcgtcgcccc ctttctgcgt gggacagttt gaaaaggtgg gtggggtgga gtgaagtttg 2040 gagagggacg ctgtttggtt ctatgtggtt ggtctgtttc ccggacaaga aaaattgcaa 2100 tcaaatgtca gcagctttta ttaccttaat ctttcagggc ctaaatttag gagagtgtcc 2160 tgagagcagt tcatacaaag ggctttctct aagacgcgct acagcccttc ctagcagagt 2220 ttatccattc gtccccaaga gcagctagaa gagatttgag gtcatgacct cccactgccg 2280 ctcaggggct gaccctattt aggaaaccaa agagggtggg ttgaacctac tctcacggac 2340 ttggatccag tgcgcacact tgcctgcgga aaagggctct ccccagccac ccggagatgg 2400 gggtaagagg aagagcagag gcttggggta gggccacctg gtgtttaaac aggcactttc 2460 teettetetg gggettattt ttgtteagaa etagaeeaga gtgtttgaae eteetttgea 2520 ggagggctgg gaatcetett tagagcaett aateetattt ateeeetgga atgtgegtge 2580 tggccagtag gagggctggc tttggcagct ccctgacccc cgcgctgccc gccctccgg 2640 ggtaatgtgg cattactggc ccacagaggt tttgagccaa tcagctctga gactgggtta 2700 gaatgtaaca gctttaactt gggatttaag aagcttttaa aaggtaataa tcctctgaaa 2760 gaaaaatgac gtaaccacag cgtgtactat gaaagctgtt attttaataa agaacgctgg 2820 gccatgaact catacctgcc aatgagtcaa acatagtatc tttatgtaga tacttagatt 2880 actaaatata tatttcatct acttctgaag ttgatagtct tcccccccc cccacttttt

tctttttga ggcaggtgga tcacctgagg ccaggagttc gagaccagcc tggccaacat 2940 agcgaaaccc gatctctact aaaaaatata aaaattggcc gggcatggtg gcgcatgcct 3000 gtggtcccag ctactcggga ggttgaggca ggagagtcgc ttgaatgcag gaggtggagg 3060 ttgcaatgag caagattgtg ccactgcact ccagcctggg caacagagca agactctgtc 3120 tc

<210> 103

<211> 3031

<212> DNA

<213> Homo sapiens

<400> 103

60 ggagagccag gaagagggcg agggcagagc atccttgggc ggagatgcct ttaaaaaaatc 120 atccaccgca gcggtagaaa cagttttgtt tggctttatt tatacggaat ggtttttcag 180 tgaaatgctg tcttgcttaa aagaagagat gcctccccag gagctcaccc ggcgactggc 240 cacagtgatc actcatgtcg atgaaattat gcagcaggaa gtcagacccc tgatggcggt 300 ggagataata gaacaacttc acagacaatt tgccattctt tcaggaggcc gaggggagga 360 tggcgcccc atcatcacgt tcccagagtt ttcggggttc aaacacatcc cagatgaaga 420 cttcctgaat gtcatgacct acctgactag catccccagt gtggaggctg ccagcattgg 480 attcattgtt gttatcgaca gacgaagaga caagtggagc tccgtaaagg catccttgac 540 acgaatagct gtggcatttc caggaaactt acagctcata ttcatccttc gtccatctcg 600 ctttatccag aggacattca ctgacattgg cattaaatac tatcgaaatg agtttaaaac 660 gaaagtgccg atcatcatgg taaactctgt ctctgacctt cacggctaca tcgacaaaag 720 ccaactgacc cgggaattag gggggacttt ggaatatcgc cacggtcagt gggtaaatca 780 ccgcactgcc atcgaaaact ttgccttgac cttgaagacc actgcccaga tgctgcagac 840 gtttgggtcc tgcctggcca cagcagagct gcccagaagc atgctatcca cggaagacct 900 tctcatgtcc cacacaaggc agcgggacaa gctgcaggat gagctgaaat tacttggaaa 960 gcaggggacc acattgctgt catgcatcca agaaccagca accaaatgtc ccaacagcaa

1020 actcaatctc aaccaacttg agaatgtaac taccatggaa aggttattag ttcaactgga 1080 tgaaacagaa aaagcettta gtcacttttg gtctgagcat catctgaagc ttaaccagtg 1140 cctacaacta cagcattttg agcacgattt ttgtaaggct aagcttgccc tggataattt 1200 gctggaagag caagcagagt ttacaggcat tggagacagc gtgatgcacg tggagcagct 1260 tcttaaggaa cacaaaaaac tggaggaaaa aagccaggag cccctggaaa aggcccagct 1320 gctggcactg gttggggacc agctcatcca aagccaccat tatgcagcag atgccatcag 1380 gccccggtgt gtggagctca ggcacctctg tgacgatttc atcaatggaa acaagaaaaa atgggacatt ttaggaaagt ccttagagtt ccatagacag ctggacaagg tcagccaatg 1440 1500 gtgtgaggca ggaatctacc tcttggcttc ccaagctgta gacaagtgcc agtctcgaga 1560 aggggttgat atcgccttga acgacattgc gacattcctg ggcacagtca aggagtaccc 1620 gttgctcagc cccaaggagt tttacaacga gtttgagttg ctgctcaccc tcgatgcaaa 1680 ggccaaagcc cagaaagttt tgcagaggct ggatgatgtc caggaaatat ttcacaagag 1740 gcaagtgagt ctgatgaaac tggcagccaa acagactcgt ccagtgcaac ctgtggcccc 1800 acatectgag tetteaceaa aatgggtgte ateaaaaaee ageeageeet eeaceteggt 1860 ccctctagct cgtcctctga gaacgtctga ggaaccttat acggagacag agttgaactc 1920 ccggggaaag gaagatgatg agactaaatt tgaagtcaag agtgaagaaa tctttgaaag 1980 ccatcatgaa agggggaacc ctgagctgga gcagcaggcc aggctcggag acctttcccc 2040 ccgcagatac tcttctcagt actttaagta agtgtgatga aggaatcatc tagcaacttc 2100 cttcttagaa aaaaaggaag tgccttcata tttccttgaa atttaaactt gttccattct 2160 attctaagca aaaattaaaa ggacacagtt cagaagagct ctttcagcaa ataaataatt 2220 gtttcacaaa agcactgctg taaacaagat cactttgatg gccagagaca cttatgtttt 2280 caaccaatgg caaccttaaa cacttccaag tatagataca cagggtatat atgggcaaaa 2340 2400 aatatgettt tgttetetat gtttttttaa ttggteagaa aaettaaaet gtaatgatetaaaaccctgt atctactctg aaagtaacta caacctagaa tgtttgacac tgtagttttg 2460 2520 acattagtta aaaattctaa attatctaag caatgtaaac aagcctcaaa tttcaaaata 2580 gaaaaaaatt aaaatttctg taaacattaa aaagctacct gctaaaaaatt gtaagtatca 2640 tcattcagtt gtgtatactg agaaatcttt tttcgttttg ttttgcgtgt ttccgacatc 2700 accttattat atgagacatc tgattttccc taacaggtgc ctctgcagtc aaaggcctta

gagtgagttc agtcactctt gctgaagtca ttattttggc cttcatataa tctccctagc 2760 agtagacacc acctagttct ttctgtagtg aagggaggta gtgtgtatta tagccacatt 2820 tttatcctgc tttgtaaaat aaatgtaact tactctatta gatctcagac acatctcttt 2880 gattacaagg aacatgcagc tttaaaaatg ctttaacccc aaactggcaa cttttctatc 2940 actttttac tctgttttca agtttgaaat atttagaaaa taaagatcac ctctgacagt 3000 tattgatgaa aaataaattg ttttagatat t

<210> 104

<211> 1945

<212> DNA

<213> Homo sapiens

<400> 104

60 agettaegge egacaaacca etetteteta teagtatgee ettgaataga tgaggttgtg 120 caaagtcctt tgctcttaaa tgtattgctg tcattgagaa tatttggagg ttttctcttg 180 ggtttgtttg gattttttt ttcagctttt gtctgaattt tggttttatt tttctggggc agagaaaatg gctttcctta tgaaaagtat gataagtaac caggtaaaga atttaggatt 240 tggtggtggg tctgaagaaa ataaagaaga aggaggtgca tctgatcctg cagcagctca 300 360 agggatgact agagaggagt atgaggagta tcaaaagcaa atgattgagg agaagatgga 420 aagagatgct gcatttacac agaaaaaggc agaaagggca tgcctcagag ttcatctcag 480 agaaaaatac aggctcccaa agagtgaaat ggatgagaat caaatccaga tggctggaga 540 tgatgtggat ttacctgaag atctccggaa aatggtagat gaagatcaag aagaggaaga 600 agataaagat tetattettg ggcagataca gaatetecag aacatggact tggataccat 660 aaaagaaaaa gcccaggcca ccttcactga aatcaagcag acagcggagc agaagtgttc 720 cgtgatgtga ggggtgggag gggtggaggg agggaaccag ccatccttgg aaaagaccac 780 tctcttgtgg gacgtttcaa gcagtacatg ttttaatgta gtgaacacag ttaggaaaac 840 cacgatgatc cattgacaga caataatttg gttgttctaa atattcctgg cagagcattt 900 agctaacacc ttgcagcggg aaccttactt tccttttagt tataaatgag ataaactgga

aaatttcagt	tgtaaatgat	gatgcagaac	acatatctgc	ttaaagacct	tgagatgagc	960
caggaagaaa	caaaagcaag	gggcatttcc	tctccaactt	tcttccttgg	aggccaagtt	1020
ctcaccctgt	ccaactattc	gcaggacacc	aggtcccttc	agagagaaat	gtggagagtc	1080
aaggtgtcta	ctgggagccg	ggtttcccac	agggagctga	gtctacagac	tccagggcaa	1140
tcaaaggtca	ccacccccac	ccctcacctc	taggatcctt	gaatttgtca	atgatactca	1200
tcaagtatgc	ttggatcctt	tggtccttgg	atgcttctca	gccaagtggc	ggtagcacag	1260
atgtggtgaa	caatgacgaa	ttgaggcagg	gaatagacct	cactagccct	ttgcaatgga	1320
gatcatcgtt	ctagtggcca	tgtgaagaat	ggaaccaagg	gaggcacaat	tagaggcaga	1380
gggaaaccag	gcagacggct	gctctttttg	agttgagctt	aactctcctt	gtctgaactt	1440
ggtgatagca	atgggaacaa	agtgggtaga	ctaacagaga	gcattaagaa	gttaaatcaa	1500
tctctctctg	tctcctccca	acctctctct	ctctttcatc	cccttctctc	cctatctctc	1560
ttttttttt	cttctcctgt	cccttcccat	cccacccctt	tagactacct	tccagtaaat	1620
cacactgtca	tttggtgcca	caagctttca	gggtagacac	tgatttttcc	cccctaatat	1680
ctgctctctt	tcaaaaggaa	taattcaaaa	gacttaggac	aattaccact	gaaacacttc	1740
gagctattta	gctaaagccc	accaaatcaa	aacaaaatac	tgatttttt	ttttttttg	1800
gtgactctgt	tcatacagtg	aataaagatc	tatcaaagga	aaaggaaact	gagaccgaaa	1860
acttagggtc	taagttgttc	taaacccagg	gttctcaaat	gtgttgtaca	aaaagtttca	1920
tgtaataaaa	ttaagcaaat	aaaac				1945

<210> 105

<211> 1686

<212> DNA

<213> Homo sapiens

<400> 105

atcgctcagg ctgtaggagg gaaatggaag gatgtcctcc cgggctctgg ctggcgctgg 60 gtgtccgagt cagcggagcg cccccagcag tctccccgag gcagagtcat gggggtgctg 120 gcgcctggac gctgtctcat cccggggagc cgctttccca ccggctccct gggctccagc 180

cgccccacgc	gagcccccgg	ctggttctgg	ggccaggacc	gccctctcc	aaggcagact	240
tcccttcatt	ccacgacaaa	gacgcgcagc	cccgtttccc	tggggctcta	gcccgtgaga	300
tcgccgggtg	tatcccgact	cccgccggca	cgtgcgctcc	cccagggcag	ggcctgcctg	360
tcccttccg	cgggtcgcca	gcagccagca	caggccgcaa	acggcggtcc	gcagagcgga	420
ccaacggagc	cgaccctcgc	aggcttggag	ccggacgcgg	cggggcagag	ccccgaggc	480
tgcagctcgc	cggaacccgc	gggagggcag	ccgggctggg	cggagcgcac	agcgccacgg	540
accgaccgcg	caggctctgc	cggccacttc	cggtgtcgcg	cggcggctcc	cggcaggagg	600
cagagggcac	accgccagcc	ccaggccagg	ctgcgagggc	cgcggacccg	agccgggaag	660
gaccttgggc	ggacgagccg	cgcgtcccgc	agccatggag	caggacgacc	cggtcgaggc	720
gctgacggag	ctgcgcgagc	ggcggctggg	cgcgctggag	ctgctgcagg	cggcggccgg	780
ctcgggcttg	gcagcctacg	cggtgtgggc	gctgctgctc	cagcccggct	tccggcgcgt	840
gccgctgcgg	ctgcaggtgc	ggggcggggc	caggccgggc	aggggagctc	ggctgccgct	900
cagggtctca	aggtctgggc	gtggccgggg	tgagctccgc	cccgccgtgt	ggtagttcgg	960
gccgggctgc	gggcggggcg	ggagcggcca	gtggactctc	gccgccaccc	ggtccaggtg	1020
ccctacgtcg	gcgcgagcgc	gcggcaggtg	gagcacgtgt	tgtcgctgct	gcgaggacgc	1080
cccggaaaaa	cggtggatct	gggctctggc	gacggcagga	tcgtgctggc	ggcccacagg	1140
tgcggcctcc	gcccggccgt	gggctacgag	ctgaacccct	ggctggtggc	gctggcgcgg	1200
ctgcacgcct	ggagggccgg	ctgtgccggc	agcgtctgct	atcgccgcaa	ggatctctgg	1260
aaggtaacct	ggggatccct	ggccacccgc	tgacagccca	aggtgcggct	gacacctgcg	1320
agggctgggg	gccgggactc	ggaagctgcg	atgacccggt	gcccaccagg	cctctccccg	1380
gccggggcga	cttctcttcc	ggcagctccc	gctgctggag	gacaagctgc	ggacagagct	1440
gcctgctggg	gcccgcgtgg	tgtctgggcg	cttcccactc	cccacctggc	agcctgtgac	1500
cgcggttggc	gagggcctgg	accgagtatg	ggcttatgat	gttcctgagg	gtgggcaggc	1560
tggggaggcc	gcctcctcgc	ggatacccat	ccaggctgcc	cccggaccta	gttctgcccc	1620
catcccgggg	ggccttattt	ctcaggccag	ctgagtatta	gacacgataa	agactctgtg	1680
ggttct						1686

<211> 2276

<212> DNA

<213> Homo sapiens

60	gttggatctg	cggagaaatt	accgtcgccg	tgcggctgct	gctttggccc	acggaagccg
120	ggagttgggg	ggttctcaga	cgcctctgag	cctcgcggtt	aatggtgaga	gcagtctagg
180	tggggccccg	ccccaagtt	ggacgaccac	gtgccgccgg	gttttgcaga	atgaaatgga
240	aatctggctc	accgggttag	cgtgggccgg	gctgcgcatg	gccccgaaaa	ccccagtggc
300	ttgcgagttt	gagaatgggc	accgtggggt	aggcatggag	gcatgcgcaa	gaagtgttac
360	ggtgctctgc	aaggctactt	gtctcaaacc	cagcctgtgg	ccccagccac	gccctcacct
420	acagacctgg	agttcttgag	tcctaccccg	tcatcaatgc	agaggtgact	tttgagttgc
480	gtccggtaag	ggggcggagg	gggagaacga	gtgcactctt	taccttgggt	accgatcccc
540	ccctctcctc	ggccccttcg	ggcaagctcg	tcagtttgcc	agaccctacc	gaaggggcac
600	acctggggac	cgacaggctc	gagcggagag	gtagcctatg	attcttagtc	agatgtcaag
660	cgagaggagc	tggggactca	tggttagaag	agagccaccc	cactgagcta	agggctagaa
720	cgtggttgat	tggggcacag	taggggttgt	ctgggttctc	agtccagtac	gccccgagaa
780	catggaaata	gatggtatct	gtttccacga	gtggtttttg	ttcccaaaca	aatcacgcag
840	aaaaaacgag	aaaaacaaaa	aatggaaaag	aaaaacccca	aatcttcagt	ccacitacta
900	ggaggggaag	ctttggcctg	ttttttcctg	tctccctttc	tggagttttg	atggactggt
960	caaagaatcc	aaatgtgggc	aagtaaagaa	tggacagctg	ctgagctgag	gctggtgctg
1020	tagaattaaa	gagataccag	cttaacctag	agtcaaggcg	gctagtttat	cttgtctctt
1080	ccatagctgt	tttctgcagt	tttgcaccct	atagtatgtg	accctctaaa	gggtctatga
1140	ctattattgg	atgtctaagg	cacaagactg	cagtgacctt	tgaaaggtgc	tatcatactc
1200	tgggaccctg	ccctagctta	cttatgtctt	ctttcctgtc	ccttatgcct	cagagtgggg
1260	gcctcaggga	ggaaatctga	ctggccagtt	ggaagtgagg	gccagtataa	ggggacctga
1320	cgctctcgtc	gcggctgcag	ggtcccggca	agttcagtcg	tcctttgcag	gcctcatttc
1380	cggtgtggct	acatggcctc	gtttccggaa	tctccttttc	ctcggtgccc	ttctgcggct
1440	ttcaacgcca	tgcgtaagtc	gacatgaagg	ggtgttcaac	gtgtcatcaa	gtctctgatg

gaggaggtga	agaagcgcaa	gaaggcggtg	ctcttctgcc	tgagtgagga	caagaagaac	1500
atcatcctgg	aggagggcaa	ggagatcctg	gtgggcgatg	tgggccagac	tgtcgacgac	1560
ccctacgcca	cctttgtcaa	gatgctgcca	gataaggact	gccgctatgc	cctctatgat	1620
gcaacctatg	agaccaagga	gagcaagaag	gaggatctgg	tgtttatctt	ctgggccccc	1680
gagtctgcgc	cccttaagag	caaaatgatt	tatgccagct	ccaaggacgc	catcaagaag	1740
aagctgacag	ggatcaagca	tgaattgcaa	gcaaactgct	acgaggaggt	caaggaccgc	1800
tgcaccctgg	cagagaagct	ggggggcagt	gccgtcatct	ccctggaggg	caagcctttg	1860
tgagcccctt	ctggccccct	gcctggagca	tctggcagcc	ccacacctgc	ccttgggggt	1920
tgcaggctgc	cccttcctg	ccagaccgga	ggggctgggg	ggatcccagc	agggggaggg	1980
caatcccttc	accccagttg	ccaaacagac	ccccacccc	ctggattttc	cttctccctc	2040
catcccttga	cggttctggc	cttcccaaac	tgcttttgat	cttttgattc	ctcttgggct	2100
gaagcagacc	aagttccccc	caggcacccc	agttgtgggg	gagcctgtat	tttttttaac	2160
aacatcccca	ttccccacct	ggtcctcccc	cttcccatgc	tgccaacttc	taaccgcaat	2220
agtgactctg	tgcttgtctg	tttagttctg	tgtataaatg	gaatgttgtg	gagatg	2276

<210> 107

<211> 1793

<212> DNA

<213> Homo sapiens

caaatgagag	tgaccccaga	cccagcaagg	ctgtgtggct	gagtgggcag	aggagtgcga	60
gtggtgagag	gtgggaggag	agggtgcagg	caggactgtg	cctggccccg	cagcccacag	120
ctcagtggaa	ggcacgtgca	ggggctgagc	agggataggt	ctggctgctc	ggtgagggtg	180
aagcagggac	tccaagcagg	aaacttgcat	ggttggggca	ggagatgatg	gagcgccagg	240
cgtggggatg	aggaaggagc	caagaaatgg	gtacattttg	gagacagaac	ttactggact	300
tggcagtgag	ttgaatttgt	gggaagaggg	agagatagag	gcacagctgg	ctttcagagg	360
ggatgtagct	aataaggtgc	ctggagggat	tgtttaccca	catgaaggat	gcagagggaa	420

480	ttatgattga	cttggacaca	gggagatctg	tggagatgtc	tctcggagag	gagcagggtt
540	tttgggaggc	atcccagcac	catgtctgta	ggtggtggct	ttaggccggg	aaaagtgggt
600	gtgaaacccc	ggccaacatg	agaccaacct	caggagttgg	cacctgaggt	cgaggtggat
660	agcccagcta	catacctgta	catggtgggg	attagccggg	aaaatacaaa	gtccctacta
720	cagtgagccg	gcggaggttg	aacccaggag	gaatcacttg	tgaggcagga	cttgagaagc
780	caaaaaaaaa	aactctgtct	aaaagagtga	agcctgttta	actgcactcc	agatgccact
840	aaccagcaag	ttctgatggt	attgggtttg	aagaaaagaa	aaaaaaggaa	aaaaaaaaaa
900	accaatgaga	atagagtgaa	taggggaaga	aactcacccc	ccttgctcca	accactagct
960	gctttggcct	tggggctatg	tcattgtgca	gggtttcaaa	agggggtgag	cagcagatgg
1020	atgtttgatg	gtgaagggga	gagaataagc	acagctatgg	tgggccaaac	ggagcagggg
1080	tgcctgtcta	ggacaaacca	tattgccttg	ctccagccac	cttagcccag	tctgttctta
1140	cagagggacc	agcacagcag	gtgttaatac	tcaggtgcag	tatgcagggc	tacctgtggc
1200	agtcacttcc	tgaccccagc	gcagcccacc	caaaacaggt	gggagccaag	tgtgctcaca
1260	gtccctctga	gcttggggag	actatttcag	aggagactgc	gcagacgacc	ccgcttttct
1320	tttggtggag	taaggaggaa	agctctgatc	gggaaggtga	tctcaggagg	atgccgcatc
1380	cacccaccgc	ggagtacatt	ctctccactt	tttttggagc	tgactgtgat	tggatggggt
1440	gggcagagta	agacagggca	cccacctctc	tactgggcta	cactcaggct	tctctgagat
1500	cgagaagcac	acaaggtatt	aggcaaaata	atgagctggc	actggaggga	gcagacttcc
1560	agaatagaga	agattctatc	tacagcttcc	caaactgagt	tttaaggcaa	aagcattttt
1620	atgagataag	aacctcctaa	aagcttaata	ttttaaaaaat	gagggaccaa	taccagaaca
1680	agtagaaatt	aaaggaaccg	gaagatatac	ataagatcaa	gcaatgtgaa	ggacatatta
1740	ctagaataaa	gagaaaagta	tgcgatacag	gtggaaataa	aggtatagct	gttggtgtta
1793	aag	tgtatcagcc	accagcttga	gaattggagg	atgcatttgt	taactgagga

<210> 108

<211> 1659

<212> DNA

<213> Homo sapiens

60	cggctctgcc	caagtaccgc	gctccaacac	agctgcgccg	tctgctcttc	agaaggagcc
120	tgaatccgcc	gggctgtctg	ccttgtgcca	ggccaggtgg	cttccgcaag	cctgccgcga
180	agcaccagca	cgcgggagaa	tctctcctgc	ccacgctggc	tgcctggcac	tctgccgccc
240	cttccttcct	caggccggag	gcaacccccc	tgtcctcctc	cctggctgct	ggttctgagc
300	gcatgccgag	ggaggaggca	cccgggaata	gagagccgtg	gctggcagag	tagccgggaa
360	agcatcgtgg	gactcacagc	ctctcctggg	ggctccggtt	ctcccaggca	ccctgggac
420	tcggaggccc	gagcaggtgg	catggcccag	tcagagtccg	gtcggactgc	ccaagcaggt
480	cgttcttggg	ggggcccagt	ggtggcgaaa	atctgggcca	gcaaggccgg	ctggctttgt
540	gcccacggt	ggaccaggct	agaggaacag	cttgcaaggg	ggcctctaga	cccaggatgg
600	tgggtggtac	agagtgggcc	atggccctgg	ggccctcccc	tccaaggagg	ccctgaaggg
660	caggcacaca	tgaggggagc	ccttctcctg	gggggctcgc	cagggaaact	ctgctccagg
720	ggctaagccg	gctgggagaa	ggggcagggg	tgtggacaga	gtgtttggga	gggcccattg
780	ttccccacc	gatttcccga	cttccctccc	cccttagtcc	tttgtgcctc	aggggtcctg
840	cctggttgaa	ccacccagac	ggtgtaggga	cacagttggg	acttgaggac	ctccctctac
900	aaaacccatc	ggcttctccc	tttcactctg	ttccaaccct	ctcctgcttg	ttgtttctct
960	cctaccccct	agcctcaatc	tttgttccaa	aggtggtgga	ctgcaactcc	ctggcatgac
1020	tgcctggggg	ctgggacccc	agatcaggct	ccagcctcag	ggtttccagt	ccaaggggca
1080	tggcattttt	ccgcactccc	gtgctgactc	acttccgcag	tgcaccagcc	gtggccttca
1140	agtttccagt	cgccctgccc	ccccatggta	ggaccctcag	ggcttgggat	tgcggacaag
1200	cttgtcccta	gtgccgagtc	caccccatca	ggtagccccc	acttacccta	tgccctgtcc
1260	ccgagtggca	ctgtccttct	ctggatctag	caaaccgcct	cctccagcct	cctccagctt
1320	cctgcctcag	cagagccccg	ccccatgcc	ctttccctcc	aggatgcccc	cgcctgcccc
1380	ccctctccag	taatcccgct	cccagtttta	ctgccaccca	cttcagaaca	cgggtcaggc
1440	agccccggga	cccgggaggc	ctccaccctt	aggcctgctc	ccaccagcct	gcaaccccac
1500	ctccagacct	tgggagtccc	acgcttcctg	gccaggctgg	tggtggaggg	tgctgagagt
1560	tctcaaggac	tctcattggt	tggcaaaaaa	gaaaccacga	tgcagccaca	ggctggcccc
1620	agatttattt	ctctttttaa	ctttttctct	tagagacact	gggaaagcaa	taacccgtgg

cttgaaataa taaatatttt attgggatgt gaggtgcag

1659

<210> 109

<211> 1624

<212> DNA

<213> Homo sapiens

<400> 109

60 aggcaggcgc gctcgggcga ggtaggagcg atgtggcctg ggaacgcctg gcgcgccgca 120 ctcttctggg tgcccgcgg ccgccgcgca cagtcagcgc tggcccagct gcgtggcatt 180 ctggaggggg agctggaagg catccgcgga gctggcactt ggaagagtga gcgggtcatc 240 acgtcccgtc aggggccgca catccgcgtg gacggcgtct ccggagggcc tggcactgtc 300 atctttccag gcctgccctc gccccacctg agctgctgta tccatctcct ctccttcacc 360 tcaggaatcc ttaacttctg tgccaacaac tacctgggcc tgagcagcca ccctgaggtg 420 atccaggcag gtctgcaggc tctggaggag tttggagctg gcctcagctc tgtccgcttt 480 atctgtggaa cccagagcat ccacaagaat ctagaagcaa aaatagcccg cttccaccag 540 cgggaggatg ccatceteta teccagetgt tatgaegeea aegeeggeet etttgaggee 600 ctgctgaccc cagaggacgc agtcctgtcg gacgagctga accatgcctc catcatcgac 660 ggcatccggc tgtgcaaggc ccacaagtac cgctatcgcc acctggacat ggccgaccta 720 gaagccaagc tgcaggaggc ccagaagcat cggctgcgcc tggtggccac tgatgggcc 780 tttttccatg gatggcgaca tcgcacccct gcaggagatc tgctgcctcg cctctagata 840 tggtgccctg gtcttcatgg atgaatgcca tgccactggc ttcctggggc ccacaggacg 900 gggcacagat gagctgctgg gtgtgatgga ccaggtcacc atcatcaact ccaccctggg 960 gaaggccctg ggtggagcat cagggggcta cacgacaggg cctgggcccc tggtgtccct 1020 gctgcggcag cgcgccggc catacctctt ctccaacagt ctgccacctg ctgtcgttgg 1080 ctgcgcctcc aaggccctag atctgctgat ggggagtaac accattgtcc agtctatggc 1140 tgccaagacc cagaggttcc gtagtaagat ggaagctgct ggcttcacta tctcgggagc 1200 cagtcacccc atctgccctg tgatgctggg tgatgcccgg ctggcctctc gcatggcgga

1260 tgacatgctg aagagaggca tctttgtcat cgggttcagc taccccgtgg tccccaaggg 1320 caaggecegg ateegggtae agateteage agtgeatage gaggaagaea ttgacegetg 1380 cgtggaggcc ttcgtggaag tggggcgact gcacggggca ctgccctgag ctctgggccc 1440 agtcctgtgg ccggttgaag aatcaggcag gagccagggc tctgagggga ggcgcctgag 1500 gactgcagat ctccactgac ctctttccct agattaagat gggacccagt ggccgggcac 1560 ggtggctcag gcctgtaatc ccagcacttt gggaggccaa ggtaggcgga tcacctgagg 1620 tcgggagttt gagaccagcc tgaccaacat ggagaaaccc cgtctctact aaaaatacga 1624 aatt

<210> 110

<211> 1829

<212> DNA

<213> Homo sapiens

<400> 110

taggacccat tttggggggg aaaaaccaac acattccaga gctttccaag tcctttgaac 60 120 ttcaggttca cattcaggga tcacacagtt ctgcctgttc tcagggcaca gcaactgcca atcccgctga agaggcctcc ctgggcacag cacaggctgc acggtgcacg catttccctg 180 240 aaggcagccc cttcttcgga agcagctgtt ccaggcctcg gaacagggcc tgggtatccg 300 cgtggtgggc tggcagctga cggcctgctc agtggagcca ggagctaact cagaccccaa 360 agcaagcagg gggccagtgg cggggcccag cgcccagcag gacacccatg caagaggctg 420 agcccccaa catccaagga caggagagac atggagtggc gctggacagt cacgacaagg 480 acttgcctcc agcactggac acacctgtgt taagaccagc cctctgcttc ccagtcccgc 540 cagcctgggg catcctccat gggctcagca ctgagaggtc ttgggtctgc cacgttctct agetetecag teacceacte atceagggta ggaggggtte teectgeece eeeegtgge 600 660 cttgggatct caccetetee atgteetggg gacageeteg eecteageeg gactgeatee 720 ctcctgggcc tgagcctcgg gactcagtgg acaccaaagt caagaccagc acccaccacg 780 ggccctgcca gcctctgcct tccccagctg gcctgggttc tggcctgggt gaggatctgg

aagctgttgg	caggactcaa	ccaagcactg	ctctctagct	ccagggcact	aagccacagg	840
aggcagcgcc	ctgcagcctc	ccgtccacac	tgccagcaat	gccctggcc	cagtgagccc	900
agacgctcct	ccacccttc	cagaccaagc	tcaacgcctc	caagaccagc	aggccaaggc	960
caagccctgc	cccagatcct	cataggcaga	gaagcccttc	tgacatttcc	cccaggaggc	1020
agggggtggt	ctgagtctcc	tcacagcaga	gagacccacc	ggagccccct	caactttgca	1080
gatgcccacc	tggaaaatgg	gctgagctgc	accagaccct	cacacaccac	agcactgcaa	1140
gctgatggaa	tgttccagtt	atgatggaca	cttcgtgatc	tgcaatgact	gttgattcag	1200
cacattagca	tctgacacag	ccaacctgaa	tacttcctgc	cccaggcggt	cagggttatg	1260
gcacgatgca	ggtggcactc	aggggctaac	ttcaggctga	tgagtgtgtg	gggtatgggg	1320
cagcagaggc	agccagccag	caaagagggg	ccactgagca	ccagggccct	ggtggaggct	1380
gctgtgggac	ggtcaggcca	ccaccgcaaa	gaggcagccg	gagcttctgc	acaggatgtc	1440
cctggcccca	ggtcctgcag	caccttagtc	catactacca	gccccaccca	ccttccttcc	1500
tcttccctct	tctaggacac	aggctgtgga	ccccttcagg	tgcactataa	tggggctgga	1560
ggggccccca	catctctcag	ccccactaat	gcagaatccc	actaccagtg	agctagaagg	1620
tgctcagagg	ccaggggtct	ctactgccca	tgccgggcgg	ccttccagtc	attgcacagc	1680
aaagccatgt	gcagggcgtc	ccctcaacc	ctgccctgaa	catgccccag	ggcactgagg	1740
ggcgaagcca	gtgcttgggc	tctgctgctg	ggagtctctg	gtctgtgtct	gtgtgtgcct	1800
gtaagtgtga	aataaacctc	tctgatggc				1829

<210> 111

<211> 3086

<212> DNA

<213> Homo sapiens

<400> 111

gttcaggcct ttgcctgtcc ttccctcagc aaaaatactg tgttttggaa aacattacca 60 ataaaggagc tgggaggtgg aattggatca aaataccttt agatgaaagc agcagcacaa 120 gccattccct ttaaatgagc tggcctcacc tctggggcct atgaagaaaa gcctgcttca 180

240 aggtgatagt tttcattttg cttcccagca cctctgcagt cataaccaaa gtgaaggaca 300 atattgcatg acttcagaag aaagccatcc agccaccttg caacatgttc aggaaattct 360 ggactccctt ggggcttgca aaactcccta tgtcttgcag accaaaagca agttctcagt 420 cacctagete tagtttgeat aattaaagaa agtggaaget ggttetttte tgggtgaeee 480 ttcacccaac caagetcata aggacttgtg acaaaaataa gatagcaata aaatgaagtt 540 ttaacagtga aaacttctat cacttagata agcaggaaaa gccagtcccc tagatgccca 600 tctgacccta ccttactggg gtcatacagc caaagcagtg tccacttcag gtactgtaat 660 gttttgaagt tgacacatat aatttaatgt aatttcatgt cataagttat aagacttttc 720 agagaaacaa tttagtaata tcttctgtaa tacccatctt cattttttat atgaaaaagc 780 atagectatg atetgteace ttgeteacte ceacateett acetettate etteteacat 840 cgtcccatta acacattatc catctttggg gggaaaaaat acactaaatt ttagacagag 900 tcactttcac tatggccaca atgggagaaa agacagtcca ccttcaaagt caaccagaat 960 gactettaac etetettgte tgggttggge atceagataa gattttette gtacaaagag 1020 tcttgctact aggaaaaaga gtttgaaaat cactagtcta actaaatatc tcactttaaa 1080 aaaagcacaa actaagactc aatgaggttt atcttccaca agatcagcca gttttagcag 1140 agcagttgct aaaacccagg tctcaaactc cttgtctatg gctcatctaa ctaagcaaca 1200 aaaagcccaa tgagctctgg agagagagag ggagctaaaa caggactcaa tcaaaaccca cttgggatta gggaagccac cctctgtgag tgagttaaac tgagattccc tccccttcac 1260 cctggcttcc tttgcagaac aagggtcacc gccagaggga aagctgagtt tacggagggg 1320 1380 atcctggttg gagtcagagt ataccttggt ttggttttgt ggggtttttt gagacagggt 1440 ctcactgtca cccaggctgg agcacagtga cagtcatggc tcactgtggc ctcagactcc 1500 tggcctcagg cgatcctccc acctcaacct ccagagtatc tgggactata ggcacgtacc 1560 accataccca gctaatattt tttttaattt tatatttttt ggagacgggg tgtcactatg 1620 ttacccaggt ctcaatcact atgttactcc ttgcctcaag cgatcctctc accttggcct 1680 cccaaagtgc tgagcttaca ggtgtcaacc actgtggcca gccacgcatt ggttttaagg 1740 tccagaattt ttctgtttgg agccttcaca attagtttta ggttgggaga ccgtgaaccc 1800 accaagcagc cctttagagg ctggaaaaag agtttggaaa aagaactctg tggctttagg 1860 aatttctctc ggaaatcctc tagggcagag aaggaaaatt taccaaatgg gagagtgtat 1920 tagtctattc ttacattgct ataaggaaat accccagact gggtaattta taaaggaaag

agttttaatt	gactcacagt	tccacatggc	tgggaaagcc	tcaggaaact	tacaatcata	1980
gcagaaggca	aaggggaaga	aaggcacctt	cttcacaggg	cggcaggaag	gagaagtgca	2040
gagcaaagtg	gggcaaagcc	tctataaagc	catcagatct	catgagaact	cactatcacg	2100
agaacagcag	gggagaacca	ccccatgat	ccaatcacct	tccacgaggt	ccctcccca	2160
acacgtgggg	atcacaattt	ggattacaat	tcaagatgag	atttgggtga	ggacacagag	2220
ccggaccata	tcagagagaa	agctattact	gaagaccttt	ctaactcact	tctgtaaaga	2280
tcaattcaat	aaaagcagca	aacacacata	ctttgctttc	cttgtgatta	atgccttgac	2340
ttttttgtgg	aaagtaacac	cccaagaaag	ccagctactc	atgttggcaa	taaaggtaaa	2400
agtatctatg	gaataaggac	catttttagg	acaatacttt	ccctactact	tagttctagt	2460
cccttttttg	tagaattctg	aggactttct	acatacacaa	tcatgtcatc	agcaaataaa	2520
gattattgta	cttgttcttt	gccaacccat	atgtcttgcc	ttactgccct	ggttaggacc	2580
ttcagaacaa	tactggatat	aagtggtgaa	agcacatatc	ctcccttgt	tcctaatttt	2640
agagggaaag	tactcagtct	ttcgccatta	agtacaatgt	cagctgtaag	ttttcctaga	2700
gaccctttct	cagcttgaag	atgttccctg	gtattcatag	tttgctaaaa	ggtttttgtc	2760
attttaaatc	ataaatgggt	gttgaatttt	gtcaaaggct	tttaatgcat	ctatggagat	2820
gatccaagtt	tttttcctcc	ttatttctgc	taaggttgta	taattatgct	cattggtatt	2880
ttaaatgtta	aattaacctt	gcgttcctgg	gataagaccc	actgatcatg	atgcattttc	2940
ctctttgtaa	attgctgtat	tcattttagt	ttcttcagga	ttttgcctat	gtttgaagga	3000
tattggtttg	taatttttct	tgtaacatct	ttgtctggtt	ttgaaatcaa	agtaatactg	3060
gcctaataaa	atgagttgga	atgtgt				3086

<210> 112

<211> 2204

<212> DNA

<213> Homo sapiens

<400> 112

gagcacctgg cgccgcctgc ctgacgtcac ggtcactgac agcgtgagcc cgcggcggct 60

120 gctgccatgg tggctggcgg ccgggtaagg gtctgagtgg atctcctgcc aggccagagc 180 gccttcgggg gccgcggcgg aaggccagga gtttgcagcc agggcgccgg gtttgtggtc 240 tgcagtgtcg tgaggctgag gtgcagcatg tctagactgg gagccctggg tggtgcccgt 300 gccgggctgg gactgttgct gggtaccgcc gccggccttg gattcctgtg cctcctttac 360 agccagcgat ggaaacggac ccagcgtcat ggccgcagcc agagcctgcc caactccctg 420 gactatacgc agacttcaga tcccggacgc cacgtgatgc tcctgcgggc tggaccgcct 480 ggactttgtg ctgaccagcc ttgtggcgct gcggcgggag gtggaggagc tgagaagcag cctgcgaggg cttgcggggg agattgttgg ggaggtccga tgccacatgg aagagaacca 540 600 gagagtggct cggcggcgaa ggtttccgtt tgtccgggag aggagtgact ccactggctc 660 cagctctgtc tacttcacgg cctcctcggg agccacgttc acagatgctg agagtgaagg 720 gggttacaca acagccaatg cggagtctga caatgagcgg gactctgaca aagaaagtga 780 ggacggggaa gatgaagtga gctgtgagac tgtgaagatg gggagaaagg attctcttga 840 cttggaggaa gaggcagctt caggtgcctc cagtgccctg gaggctggag gttcctcagg 900 cttggaggat gtgctgcccc tcctgcagca ggccgacgag ctgcacaggg gtgatgagca 960 aggcaagcgg gagggcttcc agctgctgct caacaacaag ctggtgtatg gaagccggca 1020 ggactttctc tggcgcctgg cccgagccta cagtgacatg tgtgagctca ctgaggaggt 1080 gagcgagaag aagtcatatg ccctagatgg aaaagaagaa gcagaggctg ctctggagaa 1140 gggggatgag agtgctgact gtcacctgtg gtatgcggtg ctttgtggtc agctggctga 1200 gcatgagagc atccagaggc gcatccagag tggctttagc ttcaaggagc atgtggacaa 1260 agccattgct ctccagccag aaaaccccat ggctcacttt cttcttggca ggtggtgcta 1320 tcaggtctct cacctgagct ggctagaaaa aaaactgcta cagccttgct tgaaagccct 1380 ctcagtgcca ctgtggaaga tgccctccag agcttcctaa aggctgaaga actacagcca 1440 ggattttcca aagcaggaag ggtatatatt tccaagtgct acagagaact agggaaaaac 1500 tetgaageta gatggtggat gaagttggee etggagetge eagatgteae gaaggaggat 1560 ttggctatcc agaaggacct ggaagaactg gaagtcattt tacaagacta accacgtttc 1620 actggccttc atgacttgat gccactattt aaggtggggg ggcggggagg cttttttcct 1680 tagacettge tgagateagg aaaceacaea aatetgtete etgggtetga etgetaecea 1740 ctaccactcc ccattagtta atttattcta acctctaacc taatctagaa ttggggcagt 1800 actcatggct tccgtttctg ttgttctctc ccttgagtaa tctcttaaaa aaatcaagat

tcacacctgc cccaggatta cacatgggta gagcctgcaa gacctgagac cttccaattg 1860 ctggtgaggt ggatgaactt caaagctata ggaacaaagc acataacttg tcactttaat 1920 ctttttcact gactaatagg actcagtaca tatagtctta agatcatacc ttacctacca 1980 aggtaaaaag agggatcaga gtggcccaca gacattgctt tcttatcacc tatcatgtga 2040 attctacctg tattcctggg ctggaccact tgataacttc cagtgtcctg gcagcttttg 2100 gaatgacagc agtggtatgg ggtttatgat gctataaaac aatgtctgaa aagttgccta 2160 gaatatattt tgttacaaac ttgaaataaa ccaaatttga tgtt 2204

<210> 113

<211> 2613

<212> DNA

<213> Homo sapiens

<400> 113

60 atcctcctcc aggtcctggc gcacagggtg ggagcgctgc gctgcgccgc gctgcgcatc 120 geggeeget tgeegeetge eccetgeeet agetgggeea ecteeeggg etgeeggtgg 180 agggetaaga ggcgetaacg ttacgctgtt tccggttttc cagcgggetc tgtttcccct cccaaggcgg cggcggctga gcggcggagc ccccaaatg gcctggccag atgcggcagg 240 300 tttgctgctc agcgctgccg ccgccgccac tggagaaggg tcggtgcagc agctacagcg 360 acagcagcag cagcagcagc gagaggagca gcagcagcag cagcagcagc agcgagagcg 420 gcagcagcag caggagcagc agcaacaaca gcagcaacag ccgccgcccg ttcgcgagcc 480 gcagccgccg gcggcatgag gcgcgacccg gccccggct tctccatgct gctcttcggt 540 gtgttgctcg cctgctactc gcccagcctc aagtcagtgc aggaccaggc gtacaaggca 600 cccgtggtgg tggagggcaa ggtacagggg ctggtcccag ccggcggctc cagctccaac 660 agcaccegag agccgcccgc ctcgggtcgg gtggcgttgg taaaggtgct ggacaagtgg 720 ccgctccgga gcgggggct gcagcgcgag caggtgatca gcgtgggctc ctgtgtgccg 780 ctcgaaagga accagcgcta catcttttc ctggagccca cggaacagcc cttagtcttt 840 aagacggcct ttgcccccct cgataccaac ggcaaaaatc tcaagaaaga ggtgggcaag

900 atcctgtgca ctgactgcgc cacccggccc aagttgaaga agatgaagag ccagacggga 960 caggtgggtg agaagcaatc gctgaagtgt gaggcagcag ccggtaatcc ccagccttcc 1020 taccgttggt tcaaggatgg caaggagctc aaccgcagcc gagacattcg catcaaatat 1080 ggcaacggca gaaagaactc acgactacag ttcaacaagg tgaaggtgga ggacgctggg 1140 gagtatgtct gcgaggccga gaacatcctg gggaaggaca ccgtccgggg ccggctttac 1200 gtcaacagcg tgagcaccac cctgtcatcc tggtcggggc acgcccggaa gtgcaacgag 1260 acagccaagt cctattgcgt caatggaggc gtctgctact acatcgaggg catcaaccag 1320 ctctcctgca aatgtccaaa tggattcttc ggacagagat gtttggagaa actgcctttg 1380 cgattgtaca tgccagatcc taagcaaagt gtcctgtggg atacaccggg gacaggtgtc 1440 agcagttcgc aatggtcaac ttctccaagc accttggatt tgaattaaag gaagccgagg 1500 agctgtacca gaagagggtc ctgaccatca cgggcatctg cgtggctctg ctggtcgtgg 1560 gcatcgtctg tgtggtggcc tactgcaaga ccaaaaaaaca gcggaagcag atgcacaacc 1620 acctccggca gaacatgtgc ccggcccatc agaaccggag cttggccaat gggcccagcc 1680 acccccggct ggacccagag gagatccaga tggcagatta tatttccaag aacgtgccag 1740 ccacagacca tgtcatcagg agagaaactg agaccacctt ctctgggagc cactcctgtt 1800 ctccttctca ccactgctcc acagccacac ccacctccag ccacagacac gagagccaca 1860 cgtggagcct ggaacgttct gagagcctga cttctgactc ccagtcgggg atcatgctat 1920 catcagtggg taccagcaaa tgcaacagcc cagcatgtgt ggaggcccgg gcaaggcggg cagcagccta caacctggag gagcggcgca gggccaccgc gccaccctat cacgattccg 1980 2040 tggactccct tcgcgactcc ccacacagcg agaggtcagt tcctaccccc tgacctattc 2100 cccgcttagc cagagggctg gcaccactgg cccaaggctg acccttaggg cccctcagaa 2160 acactccaaa gagcctcatc tccatttttc atatgggaaa acaaggtcct agagaaggtg 2220 aaatggcctg ctcagagcca tcggcatgtt aatgacagac tgggactaga gttgggccag 2280. tggaccctgg tggacagtga ccatctaatt taattgtcct cccaggacac ttttcacact 2340 agaaaaagga cattattaat agttacactg gaacatcaag aacaaacagg cagccgggcg 2400 cggtggctca cacctgtaat cccagcactt gggaggccaa ggcggatgga tcacctgagg 2460 tcaggagttt gagactagtc tggccaacat ggtgaaaccc ccatctttac taaaaaataca 2520 aaaattagcc aggcatggtg gcacatgcct gtaatcacag ctacttggga ggctgaggca 2580 agagcatccc ttcacctggg aggcggaggt tgcagtgagc tgagatggcg ccactgcact

ccaacctcag caacagagca agactccctt tac

2613

<210> 114

<211> 2086

<212> DNA

<213> Homo sapiens

<400> 114

60 tttgaggtat gttcttcagt gcctagtttg ttgagggttt ttatcatgaa gggatgttgg 120 attitatcaa aggettitte geatetatig agataateae atggttitig tgtttaatte 180 tgtttgtgtg gagaatcaca tttattgatt tgcgtatgtt gaaccctata tatatgtttt 240 ttgactggct tatttcattc agaatgtcct cacatttcat ccatgttgta gcatatgcca 300 gaattteett eeattttaag getgaatagt atteeattgt atgtatatae eacattgtge 360 tgatccattg tctgttggac tcttgggttg cttccatgtt ttaattattg tgaataatat 420 gccgtgaaca tgggtgttca aatatctctt caaaaccctg catttaattc ttatgaaaat 480 atagccggaa gtggaattgt tggatcatat ggtaatttca tttttaattt tttgaggaac tgctatacca gtttccacag tggctatccc agtttacatg cccgcccaca gtgcgcagga 540 gtttcagttt ctccacatcc tctttagcgt ttgttatttt ctgttttttt ttcagcagta 600 660 gccatcctaa tggatatggg ttggttcctg ttttctattt ggaactttaa aaaaaattaa 720 agcaggtaat cggttctttc ttttggtaat catttctgag ttagagtagg ttaagcccag 780 gtggggcacg gtagctcatg cctgtcccaa cactttggga ggctgaggat cacttgagga 840 900 aaaaagaaca gctgcccatg atgtttttcc tttgaccttg gctgctaatt ttccaccttg 960 tggatgatcc aattaaactt aagttcaggg atttcagctt catgttttca gtgtaataat 1020 tagttttatg gctatatctg ttaaatttga aattttttt cacaacttct ggtttcattt 1080 cattgtttag ttttttttc agccagctat taagaaaaaa gcaatctata ttcacactaa 1140 tatgagacta atgaccettt aaccetcaga ataatataca ttttaaaata ataagceaat 1200 tctcttaatt ggtagaattt catctgaaca aaatgagttg ttaatttcga gaatgtggcg

1260 aaaatatttg aagtcaggct tattaatata agcaagctgt ttctgcttta gtgcttattt 1320 ccgggattgg gtctcttgag gcttcctgct tttctcctga acctgtaggt tctctaaata 1380 ctactgataa cttgctgaat atcttaaatc attgaattag aaagctttgt ctcaagttta 1440 ataatttgcc tgaggtcaca cagctggtta atggttaaca tacttctctg ataaaggtca 1500 ctagaggttc ttatgaagat acttttaggt ggcgtaacaa atgtgtttat gcatattcaa 1560 gacactettg tatecacagg ttgcactget gtgatecate etcateteet aaagatgeat 1620 cctgacttat ctccacactt gcacactgaa gaatgcaacg tcttgattaa cttgcttaag gaatgtcaca aaaatcacaa cattctgaaa ttttttggtt attgtaatga tgttgatcgg 1680 1740 gagttgagaa aatgcctgaa gaatgagtac gtagaaaaca ggaccaagag cagggagcat 1800 ggcattgcaa tgcgaaagaa actttttaat cctccagagg aatccgaaaa ataaattgta ttttcactcg atgccttggc tgagagaaga cctaaagact ctgggttgat acctgaaaga 1860 1920 atcctgtctt atttggtctc cataatcctt tgaatggaaa gtgacctgtg agagattgaa ccatggagaa atatgaaaac cctggattct gagtatttgt tgggcagggc gtttagtact 1980 gtctcccctt taccagcaaa cctgacttca ccatgtttat tccctttgcc tacaaccagt 2040 2086 taatatctga gtaacttatc tccttcaata aaataattta aataat

<210> 115

<211> 3517

<212> DNA

<213> Homo sapiens

tttttaagga	aagacccatt	taccccaatg	cactgttatg	caatctgcac	cccagtgtga	60
tgaccacacc	aagcacccag	gggtctgagc	ctggactcgt	gggtcactgc	aagtgtttgg	120
caggtgggac	aaagaccgtg	aaggcggcgg	caggctttgg	ttcctgcacg	tctgagggtc	180
ccctgccagg	ccctgggagg	cgctgcgtca	ggagccccgt	gacctttgat	gacccgggaa	240
gccgaggctg	tttgtgcctc	tcccacctct	ggaaacacct	gggggttctg	gccacatgct	300
ctgttagttg	agcatctctg	tggaggtctc	catccctggc	tgcgtgtagt	gttgggtttc	360

420 agagcaccag caggtggggc agggtgccat gtgcccttgc cgggtgcctt cggtccaaat 480 actgcagacg cgcagggctc gcctctgagg ggggcgggca tttgagtcac agccggctgc 540 aggaacaggc tgccccgcac tgaaggcagc caggccgggc tggggcaggt cccgcagcca 600 ggctgctcct gcacgggagc tcctcctcct cagcccatcc gcggcctcct gccttcaccg 660 cagctgctgc cggcactacc aggctggccc agctctaggg caacaggggc ctcttgtggc 720 aaggggcggg acaagtaaag aggctggctt ttgtcctgcg cttttccttc ccaagctttg 780 caattctggg gcacctgcaa actaaggcta gtgtcaccca agggtctctg tgcttggtaa 840 ctgatgtgag ccacgtacca ggatttcccc gttttctgag aaacccagcc cagtgcccac 900 teagecteea ectaceatge gecaectgee atacteeaeg gteatgette accegegaag 960 cctgatgagc tagtcaccac ccacatgact gatgggtaaa ctgaggcaca agagattcct 1020 cacgcaccta tagttgtatg gtctgcagtg aggtagccga tgccagagct gtgtcctccc 1080 tccatagaag ctaggagaaa ggccagactg aagtgacctg ctgaagcctt tgtcttttga 1140 cattgaattc cgtttgccca ccgccatcaa gactgctttt aaggagcttc tgcgacatga 1200 tctcttacag gaacctgaag ggccgagaag tcctgctgtg tttggtgcca tcatctctta 1260 ctttgaacag ttttttgaaa ctgttggaat ttctctggca aatcaacagg taggtcctat tattttaaat gettaattet ggaattttet eeatgttggg acaataacet ttaccetttt 1320 aacttggaat agagcattat gatgccacac taatgtattt acctgtttaa aaacatgtta 1380 1440 ctttcctgga aaaataaaca cactcagagc caatacttat taattggaat tgcacaattc 1500 tacttctgca gttggcaaac tctcgtgcgc agaaccagag atgagtccat ctcagcaaca 1560 gaatgtcgcc agctctgcac acacgtttat gttcaaagac tctcagaatg tgcagaagtc 1620 acaggcacag taagagaaca ttttttcctg acccatttga gggcaagttg gcgacctgag 1680 ccccttgcc tggcacatgt tttgtacgga caggacgggc tccccgacag gcacgagtca 1740 cctgcacctt cccagcgagg ctcaccctgg ctgtgcagtg aaggtggacg ctgccaggct 1800 tctccacatt ccttctctc cgttgtaact caagagcatt tttgcaaaga gacttggatc 1860 ctatgaaaat gtcctcttcc ttatcaggct cacctgaaac tcgtttattc tatcaataca 1920 gatttgaggt ttcctgcctt attcttaaag tccccaccat cactttgtat gtggctgaca 1980 gaggecectt ggggetggeg etgtgteeet gaacateeet gteattettt ggacaecett 2040 gtagaattet cagcacaagg cgctctggct cttttggggt gtggctcggc tgctgctgcc 2100 tggacggggg ctgccactct agaccagctg cccagcaccc cgagggtccc gccgcttggg

actggggccc aagcaggtgt gctgaaggcc tggctctggg ccaaacatgt ctcgctggct 2220 ctcaacagag aactatagtg tcttttccaa gtttggctca tttgtatacc tgttgatcac 2280 ctggtagact tagttcccct ttccagcagt ccggcgtctg ttgccaatca cataaaagtc 2340 gactggtgtg agatgaccca agtttttgca atgtacatgt tcatttttag gggtggcttt 2400 ccggagtctg ttttgagtaa gaaaagtggg atctggccaa gctctgccta gcccttgtca 2460 aagatatete atteacette etetggeege aaggeecaat gtetgggeee aetetggget 2520 catatttctg taataacaaa aactgtcttt tatcatggaa gcaataactg aggggtgtgt 2580 gaggtttaag tagtttgaca ccaaggtcaa atgttgtgtc tgtttcttat tttacacaca 2640 tggatttaac aaataggtac agctgccct tccacaccgc cccaggatct gttctcagtg 2700 ggaggacagc gcgaggcctt ctgcgcaaat cccgtcctca gcacctgagg ctgtgaatct 2760 cagaccattt gccgaaacac acgtgtgcaa gcgctcagtc gctgcccccc agcctcatcc 2820 tcaggttgct cctgatacct cggccacaat tgcgtgaggt ctggaagcca gggagcgttt 2880 gtgttcaggg cggggcggca tgcagccccc agccctttct tccaactccc gagtgaggat 2940 cactcagcct tgcttggacg acagatgctc agagttgagt ggagccttgc ccagagccca 3000 gegetegegg getgtaceca tecetgecag acceagaaag aggeecaget geagggaate 3060 agggaagccc agggctgggt gggtgtcggc ccagagccca accacggggt ggggaggggg gcatccacaa tccacagtct ccgggggacg taaccgcgcc ctgctggctt cagtacgttt 3120 3180 caggagacgg cagcgaggct accttgcatg gtgtggtgga cgagctggtg cggttccggc 3240 agaaggtccg gcagtttgcg ctggccatgc ccgaggccac gcgggaaggc cggcggcagc 3300 agetectaga aaggeageee etgetggaag eatgegaeae eetgegeegg ggeetgaetg 3360 cccacggcat caacatcaag gacagaagca gtacaacatc cacgtgggaa ctgctggatc 3420 aaaggacaaa agaccaaaaa tcagcgggct gaggatggag cacagccatg aacctgctca 3480 cgacaagacg cacccatgct tctcagggtc aaggctttat gttaaagctt cctgtcgggg 3517 ctgctaggtc agcattaaag taaggcaacc aacagtg

<210> 116

<211> 1748

<212> DNA

<213> Homo sapiens

		•				
60	cgacgccttc	ccctgggggc	aaccaagatc	tcgaggcgag	cgggcctggc	gatgtctatg
120	gcagctggac	ttggggacgc	agcccggaca	actcatctgg	tgaccgagga	ctgccggcgc
180	tgggtactac	ggggagaggc	gatgagctgc	cttagatcca	ttatggagct	gtagagtttc
240	aacagaccgc	accagcccga	attgcccact	gctgcaccac	ggtttggggc	ctgaccacgt
300	ccgcaggcgg	accagtggca	gcctccctgc	cgaggcccgc	ggctcagctc	gctccccggg
360	tgcaagtaga	cccatctggc	caggtgactg	tcccagagcc	gaaaggatca	acgctgcaca
420	caggccaacc	cctctcccca	ccagctccca	cccttctgac	agacctggtg	agggagggtg
480	aactaggggt	gaccagtgac	ctgtgacagg	gcagaagaga	ggagccatgg	tgccctttaa
540	gtgggaggat	ggaggccaag	caacattttg	cctgtaatcc	tccgttcatg	ttcacacccc
600	catctaccaa	gtgggacccc	gggcaaaaca	agaccagcct	caggagtttg	tgcttgagcc
660	gtaccagcta	tactcctgtg	cgtggtggcg	attagccggg	aaaaacaaaa	aaaaaaaaaa
720	aggtgacatc	agcctcactg	tatcagagaa	tagacaggcg	tttgcagttt	ctcaggaggc
780	taggaagagc	gagtgggtat	gggaggagca	gggaggggaa	cctgaaggag	tgcagaaagg
840	ccttttcctg	taggctgttc	ggcccagagg	ccagtgcaaa	gcaggatgag	attccgagaa
900	ggactgaccc	tcaggagtct	accacatagg	ctgctcctaa	ctcctccttg	ggacccctcc
960	aaagaacgtc	ttttgttttg	gggggttttg	ttgaggaaca	ggcatcttgc	aggtacgtct
1020	agccttaacc	ggctcactgc	gcatgatctc	gagtgtagtg	gcccaggctg	tctgtctgtt
1080	caggcaccta	gctgagacta	ctaccaagta	ctgcctctgc	aacaagcccc	tcctggctca
1140	tttgttgccc	gaggtctctc	ttataaagat	ttaaaatttt	tgtctaattt	ccaccgtgcc
1200	caaggtgctg	gtcggcctcc	atctgcccac	acctcaagca	caaactccta	aggctggtct
1260	aatgtatcac	tttcccaaag	tgtgatcgtt	cgtgcccaat	cgtgagccac	agattatagg
1320	tttaaaaaaac	gtaactacaa	attgttcata	tatgtatttc	accatatatt	atgctaacaa
1380	gcactttggg	tgtaatccca	tgctcatgcc	cgggtgcggt	caagtgaggc	taaaaagaaa
1440	caaacatgga	accagcctga	ggagttcaag	cctgaggtcg	gggcagatca	aggccaaggt
1500	gcctgtaatc	ggtggcgcat	agccgggcat	atacaaactt	tctactaaaa	gaaacccgtc
1560	aagattgcgg	ccgggaggcg	tggcttgaac	ggcaggagaa	cggaggctaa	ccagctactc

tgagcggaga ttgcgccatt gcactccagc ctgggcaaca agagtgaaac accatctcaa 1620 aaataaataa ataaataaa agaaacaagt gaagttaacg ttaataataa tatatttgat 1680 ttaacacaat gtatcccaaa tattatcact tcaacatgta tccatattaa aaagttactg 1740 acatattt

<210> 117

<211> 2816

<212> DNA

<213> Homo sapiens

ccgaggcgcg	agggcgtcct	aagcagtggg	acttgggtag	ttgaaagaaa	gctgaaaaaac	60
agccattttg	atccatgatt	ttgaaaaaaag	ggcctcattt	cccaggtgag	gcggatcccc	120
gctgcgtggt	ggggagccca	ggggctggcg	acaggaggtg	cgcgtgtgca	gcggccggca	180
caggggcctc	gcgtttaggc	gtggcccggg	gagtgccagg	ccagccgggg	ccacacccgg	240
ggccgcttgt	tccctgcccc	tcctcactgc	caatcctccc	gcatctgccc	agcaccactg	300
tcgccgctgc	gggaagtgct	tctgcgacag	gtgctgcagc	cagaaggtgc	cgctgcggcg	360
catgtgcttt	gtggaccccg	tgcggcagtg	cgcggagtgc	gccctggtgt	ccctcaagga	420
ggcggagttc	tacgacaagc	agctcaaagt	gctcctgagc	gatacttgtt	tctggatgga	480
gacagccact	atgaaatcga	aattgtacac	atttccaccg	tgcagatcct	cacagaaggc	540
ttccctcctg	gaggtaaatg	ccagcacgtc	ctttcctaag	ccaggagggt	ttggtgccat	600
gcgtgggtga	caagaggagc	atgcactttt	gggatcaggc	agccgccctg	aggagtgggg	660
tctgctgggt	ttccaggaca	atctgccttt	cctcttttgc	ggggcgtgta	tttactcagt	720
ggctttagaa	ctcgccaggt	gagtggagac	ttaaactgta	agacaacaaa	gggacatttg	780
cctcagcatg	tcataatgat	ttcctctgct	ctaaatgctc	taacgtatca	ttcggtttat	840
tgttggattc	aaaccaagga	taaagcccca	aatgcaataa	ctgagatccc	caaaaaggtc	900
tgaatggtgg	ctcatcggga	gccagcactt	cagccctcct	cctgcaggcg	tctgtgcaga	960
ctaaacccct	ggtgcatttc	ctggtgagct	ttggcccatc	ctgggcctct	ccactaaact	1020

1080 ctgctgacgg ggagctcgca tcccgttatc tgcaaactgt gctgacagat gcgtgtgccg 1140 taacccatgt tgctttcctt ccgttctctc accggctctt ggttgctcct tctcgccact 1200 geetgeecae ettettgeea tagaaaaaga catteaeget tacaceagee teegggggag 1260 ccagcetgcc tetgaaggte ageetettee teetcacegg ggeteecege atgeageggg 1320 cccgttcctc ccctcgccac ctggcttctg tccacggggt ggtccatgcc aaggttcttt 1380 gtgaaacctg aattcactta ctttggttga cttaagagag atgttggatc tgataagtgg 1440 gtttataaag cataaatgaa gataccgcag cagatgtact ttctcagttc tgtctcaggg 1500 ggagggttac ccagcaattg acagctctct gtcagtacct gccagccctg aacaggctga 1560 ggccaggggg cgtgggggct cacctgccct tgggagcctc tgccaacact gcccttcccc 1620 ccgaggcctg ctgctcccca gctcagtgtg gcctcctggg acccctgact ctcctggcac 1680 ttctgtcagc ctcctggatg atgaggtgag atgcccaggc cagtgttctg tcctgagctc 1740 agggatgtgt gtggagccgg gatggcatca agctggttgc cttgagcagg ctgcaaggta 1800 tagatgccca ggtgcaaagg gtagggtctg gagaagcggg ggtcacccca ggcacccctc 1860 tctgcctgcc tcctcctggg gagcctgagg ctcagatgaa ggccagtgtt taggggcatc 1920 agatgaaggc cagtgcctca ggaggccagg gcaacacagc ctcccggact gctctcccgg 1980 gcagaccete eccagggett etggeactgt gteeceettg tggtggettg gggggtgeag tgagccccgc tctgcccagt ctcagtagag cccttcagac cccagcgccc tgtcttccgg 2040 2100 tgggggtggg gacaatagga acagtcccct gacctgaagg cagccaaggg gccgcctgcc agcctgggcc ctgtagggca ggccacacac tcattctttc aaggccagat agtaaacctt 2160 2220 tgccagccac gtgtgctgtg gtgaaggcgg aggcggctgc agaagacagg gtgacagacg 2280 gccatggcta tgatccagtg gtgctttatc aggcaaatgc aggcggtagg cagagccatg 2340 gtcgccctgc tctagagcct aggcaggacg ttacactgac aggcaaggtt ccccagtgtt 2400 gggggtgggg gtgcgtgccc taaccacaga accgggctta tgaaagtgtg gttctagagg 2460 cccggcatgg tggcccacgc ctgtaacccc agcactttgg gagactgagg cgggcagatc 2520 acctgaggtc aggagttcga gaccagcctg ggcaacatgg tgaaaccctg tctgtactaa 2580 aaatacaaaa attagctggg tgtggtggtg ggtgcctgta gtcccagcta ctcgggaggc 2640 tgaggcagga gaatcgcttg aacccaggag gcggaggttg cagtgagctg agatggcacc 2700 actgcactcc agcctgggca acagagactc aaaaaataat taaaataaag ccaggcacgg 2760 tggctcatgc ctataatcct agcactttgg gaggttaagg cgggcagatc acctgaggtt

gggagttcga aaccagcctg accatcatgg agaaaccccg tctctactaa caatac

2816

<210> 118

<211> 3597

<212> DNA

<213> Homo sapiens

<400> 118

60 tggtcatgga ccccactgt tcctagatcc cagtactgtg ctgttctttg tagatgccct 120 acacccagge ctcagettaa tagtetettt attacacttt etteeaatta teecaatetg 180 aatgtaccat ctgttccttg ccagaactcg ggctgctgtc aagtcttggg catctgtgaa 240 ctggccatct tggtcttatt tgggttttac ggggctggtt cctacatcac agtgggaaaa 300 ctgtagggca gaaacaccag ttgtcaccgt ggccaacacg gagaaacccg cctctactaa 360 aaatacaaaa attagctggg cgtggtggca ggcgcctgta atcccagcta ctcaggaggc 420 tgaggcaaga gaatcacttg aacctgggag gcgggggttg cagtgagctg agatcgtgcc 480 atcccactcc agcctgggag gcgagacttc gactcaaaaa aaaaaaatac catagagcac 540 cactaagaag ccattagctt tttgttactt cgttacttcg ttactttacc gatacttttt acataaagcc aacaagactt tcacaaaact agcatggcca ttgacagaag tcaacaaaag 600 660 ccagatgaca gcctaacatt gaattatcgt aatgttattt taatatctaa cacttactga 720 acgaatatct accattacta tgttaaccat attgcctgac ttatctcatt cagtaattta 780 atcaggtgga tacttttatt attcccccat atttcagatg aagagaatga gacttaaggg 840 ttacatgatg tgcccaagat catactgtca gtgactactc agcaatactg ccttcctaca 900 aaatcccgta gatgaaaata acacgaagcc tccaaaattc acttaattac cctataccta 960 atgageetee cetgtgtgea gagteacetg teteteteat catecactte tgageageag 1020 gttgctgaat atgcagaggt ggtagctaag attacaattt caagtgcttg aaaacaactg 1080 taagtcaaac tgcaaatgcc cacttcaatt agaagggtcc atatcacatg gtacacctca 1140 ggtccttgaa tcttaaagct gggacagact ttggtgatca tcccatccaa ccgctcattt 1200 taaaaatgaa ataaatgagt ccaagtaatt gtaagcaact tgcccaggtt acactgttgg

1260 tcagtgacag ctacctgggt ttagccccca cagctcctga ctctcaactc tgtagtctct 1320 catttcacct ggtgccatac atctttacct gaatcatttt gaagatgaag acttttaaat 1380 atggaaaatc agatggtacc atttaatttt tcttttgcat taatagcaat gttttggctc 1440 aggaatcatt taataggaat cataaaatga gagcaatata tcatcgctgc cttaaaatgc 1500 agtaactatg gttcatttgg actgtgcttc tgaaggtaat ggaagtaagt gaatttttac 1560 atcgaaaatt ccaacctcag caatttgtca ctttgctttt tcccatctag gctgcatgat 1620 gagattattc atgaccactt ttatcactgc agggaatttt gcccttggat gtgttctgag 1680 tggagetgae atetetgeag eatettetet aggaeeette tetetgaeat ageagtgget 1740 taactettea tetgtetete etceateeag catggeacea caeteetgat ggttgetgee 1800 tacgctggcc acatagactg tgtgagggaa ctggttctgc aaggagcaga catcaatctc 1860 cagagagag acgggggcac cgccctgttg gctgccagtc agtacgggca catgcaggtg 1920 gtggagacct tgctgaagca cggagcaaac atccatgacc aactttatga tggagccact 1980 gccctcttcc tagctgccca aggtggttac ttggatgtta ttcgattact gctggcttca 2040 ggagcaaaag tcaaccagcc aaggacggga cagcgccct gtggatcgcg tcccagatgg 2100 gccacagcga ggtggtgcgg gtgttgctgc tgcgcggagc cgaccgcgac gctgcgcgga 2160 acgatggcac aacagcatta ttgaaagcag ccaacaaagg gtataatgat gtcataaaag 2220 agttgcttaa attctcaccc actcttggta ttttgaagaa tgggacatca gcgctccatg 2280 cagcagtgct cagtggaaac attaaaacag ttgcgctgct cctagaagca ggggcagacc 2340 catecetgag aaacaaggee aatgaactte eggeagaact aaccaaaaat gaaegtatat 2400 tgcgtctcct gagaagtaaa gaaggtccca gaaagagcta acttagctcc atatttgaca 2460 gaaagataga aagcttaacc acattgtcca aaaagaaatt gcatttcaag cagtgttgga 2520 aattetttta tgaaaaaaaa agatgeeeag aatgeeeate etgtgggtee etgacaaaga 2580 agagetacge tetgtgeacg aagteaaaaa ceaaacaget cagggaceet ettgeeeett 2640 caccatggac ttctcatggt gtcctgtaac tcatctccg gggggcctgg catgttcaca 2700 gattccacag aaacccattt tcaacaatgc taacttggac ctgtcagtta aactctaagg tggacagggt tctcagtact aagcaaggag acagaatgct ttgttccttt aaaagactga 2760 2820 aaagctgacc ttcaatggat tgaggcactt ttgcttttgt gttaaatgta gatgtgctaa 2880 aatatataga tetateatat tttacetaea tatgtatgte atteeagtat aaaacattet cctctaccca agaaccatag ccatgattgt tataaatcaa tgaagtgtaa acatacatta 2940

3000 ttaaaaaacc acttctgaca ttccattatg tgctattcaa agatggacta ttgaactata 3060 gaaaagacag actgtgcatt tgttcgttga tcctcatctt attcctgaca tgtaaaaatc 3120 aattttacgt agagtcaaca ttgtaggtag gttaaaatac cagtggcaaa tttggaaatt 3180 cagaaactta taaaccacga gaaatatata ggcttgtctc tttggtcttt tattttggct 3240 ctattgttgg gaatctattt cctattccat aagtaagtat acctaacatg ctgtggaatc 3300 ttgagtttcc aacaccgtgc tgcttgatag aatgactttg aggtccttgg ataaaatgtg . atatatgcaa gtacagtatg ttgctattac tattgcagga atataaataa taaaagactg 3360 ttattagcac ttagtaagtc ttcatctatg catgtttttg agttgactga ttccaagaat 3420 3480 gaaatatgag gtttattgaa ttattccttt gaaagggatc aaaacttata ttcaatgcac 3540 tttataatta atggtgtcta aatgcctcag tcagtgccta actgcacata caaaaataaa 3597 accttctttc tgtaatctac caaaataaac gcaatggtat ttttgctatt taaacac

<210> 119

<211> 3808

<212> DNA

<213> Homo sapiens

<400> 119

60 tttttaatcc caataatgaa gttacataga aaatacttaa tggtgtgtga agagaatgat 120 aatatgaaaa tacagacagt ggctggtatt ttggcatctt tttcttcaga caagctcttt 180 aaactcgcat atgttattca cacatgcctc tttaacaatt atgacaaaaa tattcttcct 240 ggcttgcatt ctgtcacaat ctgtgcagta tatagggctt aaggtattgt ggaagagctt 300 360 ctttgacctc agcagacaca tagaggcaca attaactgct agttttgcag gaatatggtt 420 ttacttcctg ttcagattta taatagactc tacctccatt agcttagact gtttttttgt 480 cattgttggt caggttagta tttcgattaa tagtatcctg agtcttaact cttcatttca cactagtttt gacactttag ttgccctgtc tttcatactt cttgtttttg ttttgagaca 540 600 gagtetggcc etgeegetea ggetggagtg eagtggeaeg ateaeggeae aetgeageet

660 ctacctcctg ggcccaagca gtgctctcga ctcaggcatg cccaactcag tagctgggac 720 tacaagtete actatattge eegggttggt ettgaacee tgagettaaa tgateettet 780 gccatggtcc gcaaagtgtt ggtattacag gagtgagcca ccatgcccaa cctccttcat 840 gcttcatagc agtcatctgt tagttgtaat atctttttgc actcttgaag ttaatgaaaa 900 cagataaatg attgtatcaa gactgtagtc cggaaataaa gcagacttag aaggcagacg 960 tctacataca acatttcccc caaatgtcta ttttgccttt ttattatttt tgttactaat 1020 tggccatctg ttaaataatc acaattgtta cagcagtatg ttctttattg actttcagaa 1080 gagggattca ggacatctta attaaagaac agtttcaacg gcacaagaaa tttgtcaaaa 1140 gccacatata aatgaaaaac aagcataaaa atacaacctt tttaatacta aaatagttga 1200 gctctccttt cattcctaaa agctacagga taaagtctag aagaacagct gagtgtacag 1260 tagcaagaca agtttaattg cctttattca attgtagtcc gcaaaacttt ggtttttcta 1320 aggtaagcca gacataatgt gtttaagtgc tcctcctaac cctcatcttt cccctccacc 1380 ccaagcctct agttctgttg caggggctgt tggcatgacc acctctgggg agagtgaatc 1440 agatgattcc gagatgggac gtttgcaagg taaaaacagt tattgagcct ataagaaacc attaccatga gctacctgtt aataccattc tttattgaaa ttaatttagt taaattcatt 1500 1560 tgaccataat ctagcagtgc ctgcacctcc aagaaaaaaa aatttttagt agcaatttca tgatttggaa ttggaagatg agctgtccgc ctcttcgtgt ttactgtttc actagatgaa 1620 gccttacata tttatttttg tttaaaattt ttaaattgtg gttgcatgtg tagctggttt 1680 cagtaataaa taagttaaaa atcttgaaaa atgggtacct taatatattt ttgtctggta 1740 1800 tccagtagca ttatgaatgc atttaaccca cttaggccta gtgttccatt attggaacac 1860 taagaatgtg ggagttattt atateetaet geteaaggee ateaceaagg teggaetttt 1920 cactcatgca aaaattcaaa aaattgcaac ctgcagcata aatgggtttt aataaggcgt 1980 ttggccatgg ttttttgtct tcttgatcat gtttcaaaat gaatgtatag tgtatacaca 2040 aattgtaggg tttttttaat gttacaaatg cttttacaaa agcagcctaa tactatgtat 2100 ggatgggtat gtatttttat ctcatttgat ttataacaga tctcagtgtg aggcttacaa 2160 taaatgtatt atttataaat catttttat tgcttttaaa ttcctgaggg aacatacaag 2220 tatctctagg actcggactc tcaggaacac atagtttttg tttgtttgat tgttttgaga 2280 ccgaatctca ctctgttgcc caggctggag tgcaatggca cgatctcagc tcactgcaaa 2340 ctccacctcc cgtgttcaaa tgattctcct gcttcatcct cctgagtagc tagaattaca

2400 ggtgcctgcc actgcacctg gctaattttt gtatttttag tagaggcggg ctttcatcat 2460 gttggccagg ctggtcttga gctcctgacc tcaggtgatc ctcccgtctc ggcctcccaa 2520 2580 ttggaactaa taaaaatcat actgttttca tatggtttta taggttctga tgaccaatat 2640 ctgattggga aataatgtca tacagaaaac agagcaaggg tgcttaacat attagctctt 2700 caaaatatca aaatatttac cttagatttt tcttgaaata tttacacatt cctgctggca 2760 ctgatttaat atattagggt ggtcttgaaa gtttgtagct tctcttaaaa gtccagaaag caaagtaaca ttgactgaat cagttaagcg agatgaatca gttacttgaa atttttagat 2820 2880 acatcagttg catgaagtca tcttagttgt tcactctgcc cttctttttt ctttagcttt 2940 gttagaggca aggggtcttc cccctcacct atttggtcct cttggtcctc ggatgtcaca 3000 gcttttccat agaacaattg gaagtggagc tagtaagtaa aaatgttcct tccctgaaat 3060 ccctcaataa ttagccaact gctattgtta cttgtaacct attgatgtaa gtattaagaa 3120 gtttttcatc aactttaacc catttttaaa aataaggctg tgtacaatca caccttaaat 3180 acagctttca ttgctgaatt atccagattt tgtagcgaga ttgattctgt ttgaacaaaa 3240 taagaataaa gaatctcaaa caattacatt gataattatg gcacctgatg gcatgttttg catagatttg aatcttgagt ttgtcataat gatgtatttg tcaaggtgag aggataaaat 3300 attaaacagt ttgctagctg aatttttat aactttaaat atttggacat aaggatgttg 3360 gttttcatgt gtacttttta tatatatata tattttttga gatggagtct tgctctgtcg 3420 tccaggcggg agtgcagtgg cgtgatctca gcttactgca acctctgcct ctcgggtcca 3480 3540 gtcctcccac ctcagcctcc tgagtagctg ggattacagg tgtgtgccat caagcccggc taatttttgt atttttagta gagatggggt ttcactatgt tggatggctg atctcgatct 3600 3660 cctgacctca ggtgatccgc ccaccttggc ctcccaaagt gctgggatta caggcatgag 3720 ccactgtgcc tggcctgttt ccttgaattg gatcaaaata tgatctatac attacaatca 3780 ggtaatgttt cttacctgat ttttgtttgt ttgtttgttt ttaagagaaa tttgatttta 3808 tttatcactg gggagaagcc tggaaagg

<210> 120

<211> 3667

<212> DNA

<213> Homo sapiens

<400> 120

60 gtatgggatt ttggtgcttt ctcagggtct ctccccacac tcactcttct cacccatatc 120 ccacagactc actcatggag acccccttgt caatatcccc tctaccttta ctcctttgcc 180 ctttcccaat tcatcttcta ccacctggat tcttttccat tcatgaactt cattcagccc 240 ttccaaagcc caagatttgc attcccttga cagggaggaa aggcaatggt aggaacctct 300 ggtggtctgg gtgtctatgt gcctggtgac cagggctgga tttttattac tctgagccca 360 ctgctagtga ggagccttga ggggtgggga caggttgctg agtgattttg aacgttgaca 420 ccagtgtgga gccagtgtgg gtgtggggag cagtgccttc ctcaggtccc agctggtcct 480 gatatgccac gtagtggatg gcatctgtct tggtccatgg gcttggtggg aacatgcttc 540 tgcttgtgtg ttttccatac ctgagggctg acgtagctta aaccacaggg catcatgcca 600 aacactcact gctgggcagg tttatttctg gggatgtcag ggtactgggg tgtaggcact 660 aagcaggata gagttagggt gtctggctag taaggggttc tgaacgcctc tgggggctgtg 720 agttttcatc tcaaagtctg ttccagagaa aggaaagtag tatagaggtg atttttagag 780 aagctgagac catgaaaaca agcctaatcc catccagaaa ctggggtaaa gtctgaaagt 840 tegttttett etteeteet gaataattgt teeagaaggg atgetaaete tgeeagaget 900 acaggcagat ttttgggctt tggaagtgga agctgaggcc tggggaaggc tgggtaagga 960 atgctggggc aatctcagac agtaggcagg tgcttggcat gaatgagaag tgactttcct 1020 ggagtccctc agtagaggat gagatagcag ggattaggcc acagtctcag atcctgatct 1080 tttttcttcc taggaaagca tacataactt gtgtctgcag aatcagtgtg ggatgatttt 1140 gctggcccaa ggcttcagcg agagggagaa gagaggtcac tacagccctc ctgtgggtaa 1200 aagcagetet ettataaace tgeeteeatg cagtggggtg ggggtaaggg tgggtgacag 1260 caaagaggtt gaggaacctc cctgggtttg gggagtgaga gcttccatgt tcccttaatg tcctaggtta attcataagg catctgagtc ctgggtctca cccagcctca cagagagaaa 1320 1380 aactgtccct gagggtgtcc cctcccactc aaaggtagaa agagattgag ccaggaactg ccctcatate etetgetetg eccetteeet tecettteet etgeceetee cacetaaage 1440 1500 tgtttggggc cctttctcag agccctgggt ggtggcaggc agggaggagt cccaagatcc

1560 tggtggccct gagccccatg ctatggttgc cagatttggc aaataaaaat gcaggatgtc 1620 cggttacatt tgaatttcag ttcaacaaca aacaattatt aagtgtaaat atgtcctagg 1680 caaatagttg ggacatatac taaaaaataa tttgttgttt atctgaaatt caagtgtaac 1740 tggtcatcct gcattgtgtc tgggaaccct accctatgac ttttccccct ctccctttgg 1800 teccaagggg ceaggaacce caaggatttg acttaaccag ttttttgaac tgeaatattg 1860 agaaggggac actgtgactt gaagacacat gaattacttt atttttaag caacaacaaa 1920 ataagaacct tctgaagcca tttgagcctc atctgccccc atccgtgtat atttaattat 1980 atataaaaga agataattac ctagaaacat atgaacagaa tcttgtttaa tcaagatgca 2040 tgtctataac tttctgtaaa tagccgcatg gcaatgctga gagtcccctt gatccccaac 2100 ctcaaaccca ttttacagaa ctggttgagg ctgctccttt gattttatgt cgtgtaaagt 2160 ctttgttccc cagccccacc cctgcctcct cccatcggga aaccccccat gggagtcatc 2220 agtgggcggg agtcggtgcc tgctccagtc cagccctgcc ttgggagatg ctggaggacc 2280 ctgtcgccct gaaggcctgt ttgctgcaca tctgcctgca gagccaaacc tcagggcccg 2340 gtgcagtgtc cagcctggta tctggcatcc cagtagcttc catgttctgt gtatgtgt 2400 ggtgtgcccc ttcctcccac tgtttgaatt cactgaaaag ccataaaggg ggcctcctgc 2460 tggagatttg gcctcccttg gctcctccca ggagccccca tgtctctcca actggctccc 2520 cacagaccac ttctgaaggg ctcacctgtt gtcactccct cctgctccct cagtcccgtg 2580 tcatgagaat ggacggtgtc cagggcttcc ggtggggtct caggagatgc ccatgctggc cctgcccgag ctggctttct cggcctgggt tcacagttca gctccatctc tacgctgggc 2640 2700 gaggagcaga cagcagtggg actccatggt tctggatacc tttcctgggg tccctgtgga 2760 ggcaaccagg attttcagga gcagccagtc agcagctcag ccagggatga cagaaccatc 2820 cctgcttact cacctctgta gtgtgagggt ctgtgggtgg tgatggagga gggactcagg gagaggccgg tgaatacagg ggctgacgct cttccctcgt gcatcctcct gcctgcggcc 2880 2940 cctggcccca tgggcacctg agggcagtac tgcatgggaa gagcccagga tgcctcaggc 3000 ctggcaactg tgacaagtat gaggaaggag agagaacggg aggggaatca ggcagggcgc 3060 attcgaggag gccagaggtg gcgaggcagg cttgccctgc acaaaccaca acagaagttg 3120 cacacagaag tcccagggac ctttgtgctg ggaactgaaa gagtggggaa ggtggagggg 3180 accatttcag agcaggctgg aatcaggtgc ttggaccagt gaagacatgt cttgcttcct 3240 ccagctctct ctggggccct cccactctcc acacccacag cagagacaaa ttgaggcaag

3300 agttgagaga gcatctgtct ggtgaggtga tgggagcagt gtgcatgggg caccaggagt 3360 tcctccatcc cacctgcctt agcgatcagg actttagggg ggcctcttca aagatagtga 3420 cccttctgcc ctgactcctg cccatctaag gacttgattt gctgctttct gaaaaccctg 3480 gggctgaaaa cttcaaaatc agggcctggc agagcctagc ttcgccaagg tcagcccacc 3540 aggagecetg cettegtete cataggaagg acacatgtae agecettgee eeeggeeete 3600 tcattcccac ttctgcttgg caatgctctc catctccctt atgtggactc ttgttcttgt 3660 ctgatctctt gtcaaattgt tattttgtaa tgaactgcgt ctccttatta aagaaatgag 3667 ctgaaag

<210> 121

<211> 3734

<212> DNA

<213> Homo sapiens

<400> 121

tttatttgag acagggtctt actttgtcac ccaggctgga atgcaatggc aagatcatgg 60 ctcactgcag cgtcgacctc ccaggctcaa gtgatcctcc catctcagcc tccccagtag 120 ctgggaccac aagcatgtgc caccacact ggctaatttt ttgtattttt tgtagagaca 180 240 gggttttgcc atgttggcca ggctggtctt gaactcctag gctcaagcaa ttcgcctgcc 300 teggtetece acagtgetgg gattacagge atgagteact ttgcetggee tettteetga 360 gatgcatggt gcttatgata agcacacatt atgtctaggt ccctgcttca agtgtggcac 420 tttggacaca tgcttcccac attccgattt tgtgccaaaa cctatgagat gatcgcaatg 480 tgggaatcat ggatggctgt ggaaaatcct aacacattca tagtagacag gcagaatcat 540 ggaatgaaaa ggcatggcgt tcagactgag ggagatgtga ctatgaatcc ctgttgtgcc cccctttctt tctctccaca gaaatggcac agggtgaagc ccagtggttt caagaggcaa 600 660 agaatctgaa tgagcagctg agagcagctt ataccagcgc cagtttccgc cacatgtctt 720 tgcttgatat ctcttccgat ctggccacgg accacttgct gggctgtgat ctgtctattg 780 cttcaaaaca catcagcaaa cctgtgcaag aacctctggt gctgcctgag gtctttggca

840 acttgaactc tgtcatgtgt gtggagggtg aagctggaag tggaaagacg gtcctcctga 900 agaaaatagc ttttctgtgg gcatctggat gctgtcccct gttaaacagg ttccagctgg 960 ttttctacct ctcccttagt tccaccagac cagacgaggg gctggccagt atcatctgtg 1020 accageteet agagaaagaa ggatetgtta etgaaatgtg catgaggaac attateeage 1080 agttaaagaa tcaggtctta ttccttttag atgactacaa agaaatatgt tcaatccctc 1140 aagtcatagg aaaactgatt caaaaaaacc acttatcccg gacctgccta ttgattgctg 1200 teegtacaaa cagggecagg gacateegee gatacetaga gaccatteta gagateaaag 1260 catttccctt ttataatact gtctgtatat tacggaaget cttttcacat aatatgactc 1320 gtctgcgaaa gtttatggtt tactttggaa agaaccaaag tttgcagaag atacagaaaa 1380 ctcctctctt tgtggcggcg atctgtgctc attggtttca gtatcctttt gacccatcct 1440 ttgatgatgt ggctgttttc aagtcctata tggaacgcct ttccttaagg aacaaagcga 1500 cagctgaaat tctcaaagca actgtgtcct cctgtggtga gctggccttg aaagggtttt 1560 tttcatgttg ctttgagttt aatgatgatg atctcgcaga agcaggggtt gatgaagatg 1620 aagatctaac catgtgcttg atgagcaaat ttacagccca gagactaaga ccattctacc 1680 ggtttttaag tcctgccttc caagaatttc ttgcggggat gaggctgatt gaactcctgg 1740 attcagatag gcaggaacat caagatttgg gactgtatca tttgaaacaa atcaactcac ccattatgac tgtaagcgcc tacaacaatt ttttgaacta tgtctccagc ctcccttcaa 1800 caaaagcagg gcccaaaatt gtgtctcatt tgctccattt agtggataac aaagagtcat 1860 tggagaatat atctgaaaat gatgactact taaagcacca gccagaaatt tcactgcaga 1920 1980 tgcagttact taggggattg tggcaaattt gtccacaagc ttacttttca atggtttcag 2040 aacatttact ggttcttgcc ctgaaaactg cttatcaaag caacactgtt gctgcgtgtt 2100 ctccatttgt tttgcaattc cttcaaggga gaacactgac tttgggtgcg cttaacttac agtacttttt cgaccacca gaaagcttgt cattgttgag gagcatccac ttcccaatac 2160 2220 gaggaaataa gacatcaccc agagcacatt tttcagttct ggaaacatgt tttgacaaat cacaggtgcc aactatagat caggactatg cttctgcctt tgaacctatg aatgaatggg 2280 2340 agcgaaattt agctgaaaaa gaggataatg taaagagcta tatggatatg cagcgcaggg 2400 catcaccaga ccttagtact ggctattgga aactttctcc aaagcagtac aagattccct 2460 gtctagaagt cgatgtgaat gatattgatg ttgtaggcca ggatatgctt gagattctaa 2520 tgacagtttt ctcagcttca cagcgcatcg aactccattt aaaccacagc agaggcttta

2580 tagaaagcat ccgcccagct cttgagctgt ctaaggcctc tgtcaccaag tgctccataa 2640 gcaagttgga actcagcgca gccgaacagg aactgcttct caccctgcct tccctggaat 2700 ctcttgaagt ctcagggaca atccagtcac aagaccaaat ctttcctaat ctggataagt 2760 tcctgtgcct gaaagaactg tctgtggatc tggagggcaa tataaatgtt ttttcagtca 2820 ttcctgaaga atttccaaac ttccaccata tggagaaatt attgatccaa atttcagctg 2880 agtatgatcc ttccaaacta gtaaaattaa ttcaaaattc tccaaacctt catgttttcc 2940 atctgaagtg taacttcttt tcggattttg ggtctctcat gactatgctt gtttcctgta 3000 agaaactcac agaaattaag ttttcggatt cattttttca agccgtccca tttgttgcca 3060 gtttgccaaa ttttatttct ctgaagatat taaatcttga aggccagcaa tttcctgatg 3120 aggaaacatc agaaaaattt gcctacattt taggttctct tagtaacctg gaagaattga tccttcctac tggggatgga atttatcgag tggccaaact gatcatccag cagtgtcagc 3180 3240 agetteattg teteegagte eteteatttt teaagaettt gaatgatgae agegtggtgg 3300 aaattgccaa agtagcaatc agtggaggtt tccagaaact tgagaaccta aagctttcaa tcaatcacaa gattacagag gaaggataca gaaatttctt tcaagcactg gacaacatgc 3360 caaacttgca ggagttggac atctccaggc atttcacaga gtgtatcaaa gctcaggcca 3420 3480 caacagtcaa gtctttgagt caatgtgtgt tacgactacc aaggctcatt agactgaaca tgttaagttg gctcttggat gcagatgata ttgcattgct taatgtcatg aaagaaagac 3540 atcctcaatc taagtactta actattctcc agaaatggat actgccgttc tctccaatca 3600 ttcagaaata aaagattcag ctaaaaactg ctggatcaat aatttgtctt ggggcatatt 3660 3720 gaggatgtaa aaaaagttgt tgattaatgc taaaaaccaa attatccaaa attattttat 3734 taaatattgc atac

<210> 122

<211> 3134

<212> DNA

<213> Homo sapiens

60 gaccgcgctc cgttaacgga agaaacaaaa tggcggctga aggcgatccg cagtggggcc 120 ccagccattc ggattgagcc ttctccctcc aaccgcttcc gcaggccagc cccctcctgc 180 cetgececte tggeeteece acetggeece ggeegeece actgegeeeg eceetteeca 240 gccgctttcc cttctccctc tgcctcggct ccaacatgag gggccggcgg ggcaggccga 300 cgaagcagtc cgcggctccc tctgcggagc gctgcgcccc ggccctgccg ccgccgctgc 360 tgcccacgtc cggacccatc cggggttccg ctcgcggcaa cgcggtagca gccggggcag 420 gtgggccacc gccaggctga ggcgcccaag acacggctga gctcgcccag gatgggcagc 480 agtageegga gaaageegee geegeeggee eeaceeeage accagegeee eggeegggg 540 gaggegggg cagecacetg geeeggaegg etgeggteeg gagggetgte aacaaagtgg 600 tgtaggagga cgccagttac tgcacggaaa gcagcgtcag gagccatagt acctacagca 660 gcactccaga aatttccaag gaaactatat ttcttacatt gatggaaatg tatggaaagc 720 atacagttgg accgagaaac taattctcag agaaaataac ttgactgaat tacacaagga 780 ttcatttgaa ggcctgctat ccctccagta tttagattta tcctgcaata aaatacagtc 840 tattgaaaga catacatttg aaccactacc atttttgaag tttataaatc ttagttgcaa 900 tgtaattaca gaactcagct ttggaacatt tcaggcctgg cacggaatgc agtttttaca 960 taagttaatt ctcaatcaca atcctctgac aactgttgaa gatccgtatc tctttaaatt 1020 gccagcatta aaatatctag acatgggaac aacgctagtc ccacttacaa cacttaagaa 1080 catteteatg atgactgttg aactggaaaa actgatetta cetagecata tggcetgetg 1140 cctctgccaa tttaaaaaca gcattgaggc tgtctgcaag acagtcaagc tgcattgcaa 1200 cagtgcatgt ctgacaaaca ccacacattg tcctgaagaa gcatcggtag ggaatccaga 1260 aggagegtte atgaaggtgt tacaageceg gaagaactae acaageactg agetgattgt 1320 tgagccagag gagccctcag acagcagtgg catcaacttg tcaggctttg ggagtgagca 1380 gctagacacc aatgacgaga gtgattttat cagtacacta agttacatct tgccttattt 1440 ctcagcggta aacctagatg tgaaatcact gttactaccg ttaattaaac tgccaaccac 1500 aggaaacagc ctggcaaaga ttcaaactgt aggccaaaac cggcagagag tgaagagagt 1560 cctcatgggc ccaaggagca tccagaaaag gcacttcaaa gaggtaggaa ggcagagcat 1620 caggagggaa cagggtgccc aggcatctgt ggagaacgct gccgaagaaa aaaggctcgg 1680 gagtccagcc ccaacggagg aggaggagag tgaagccctg ccataggagg agaacacagc 1740 ccacctcagg cctcctgcaa aaatacatag aataaacaac aacagttact aaatgaatga

aaattgtgat	tccgatgaag	cctgccagag	aaaaaaagca	tttttaaaa	gaggaaataa	1800
ggtgatatct	gattagggca	aacatgatgc	agacaagaaa	tgcaccggtt	cagaggaggg	1860
aaggtcaggc	cgcctgggga	gagtccatga	aaaagatgga	acgtgccaga	tgctgtacct	1920
ggtgctggga	aagagttgac	taggccagca	tccctttcct	caaagggggg	gctcctagac	1980
tggggggagg	gctggacatc	tgaatacatc	ctgaggagac	agtgtgggac	agcatggtgg	2040
cagtggaacc	agccgtggtt	ctgctcttgg	tcggctggaa	aggagtagat	gtaagggatg	2100
gtttagaaga	agggaagtgg	aagaaaagtt	ttctgagctg	acaagaggaa	ggaaaggccg	2160
cctagaagga	cactaaaaag	gcaagagaag	ccctaagcag	agtgagcacc	agactccaca	2220
ggttaagggc	tcagtcacac	aggaccatcc	ccatgtcaga	ccccaggtgc	aaggccaagc	2280
atcacctatg	catctgacca	actggctgta	aattggaggt	ccccacaact	ccctcctcag	2340
gtttgaacat	ttgctagaac	agctcatgga	acccaggaaa	acagttttct	tactagtgct	2400
gatttattac	aaaggatatt	ttaaaggaca	caaatgatga	agccagttga	aaagatacac	2460
agggtgaggt	ttggaagggt	ccttgtggag	ttggggtgca	ccactctcct	ggaacatgga	2520
tgtgttcgcc	aacccgaaag	ctctccaagt	cctgtctttt	aaggagtttt	ctggaggctt	2580
tatcacatag	gcatgattga	gctccagctc	tactccccac	gccagaggat	ggggaatggg	2640
gctgacagca	caacgcttcc	aaccataggt	ctttttggtg	accagtcccc	aaataaggag	2700
cccaccaaga	gtcacctcat	gagaacaaag	gacgcttcta	tcacccagaa	aattccaagg	2760
gatttaggag	ctctgtgtca	ggaaccaggt	ttaaggacca	aatgttagaa	caaaagatgt	2820
gcaaccataa	aaaacagcga	gatcatgtct	tttgcaggaa	cacagatgga	gctagaggcc	2880
attatcctca	gcaaactaag	acaggaacag	aaaaccaaat	actgtatgtt	cttttaagtg	2940
ggagcaaaat	gatgagaact	cataaacaac	agacactggg	ccctacctga	gggtggaggg	3000
tgggaggagg	gagaggagca	gaaaaaacta	ttgggtacta	ggcttggtac	ctgggtgatg	3060
aaataatctg	tacaacaaac	ccccatgaca	caagtttagc	tatataacga	acgtgcatat	3120
gtacccccta	acct					3134

<210> 123

<211> 3638

<212> DNA

<213> Homo sapiens

60	aaattctctc	tagaagcagc	ttagctcagc	ccaggatctc	ataaggtggg	gttaaaaggc
120	agagatagtg	tcagtgatgc	cagaatgatc	cagccagaga	gtgaacttac	acacccagca
180	agcattggtg	tgctggacac	tctgctgcat	tgacagtact	ctgatgtacc	tctctcttct
240	agggcacctc	cgactctggc	tctgtgagct	tgatgtggct	tcttgactat	aactctggaa
300	gatggccacc	ctccgtcctt	gctgtggacc	cgtagggcag	ataataattc	cctgctaata
360	catgaaaaaac	gaacggtggc	ctcttttttg	ggatacctct	ctcaaagtct	agcgaccctc
420	cacagatgct	taacagtgga	agcagtaagc	tttgacaccc	agcctcaggc	tccagtccag
480	accaaccaaa	aactactgac	agtgtctcag	ttgtgaaaac	cgagcaccct	ctgactcctt
540	aacccagttt	aggagggaga	ttctttggac	tgactctgac	acgtacatcc	gcggagtgga
600	tatcactgtg	aaacagatct	tctcagaaag	aaaccatggt	atgcagcagg	ggattcccca
660	tggcttactt	cctcatcatg	tctattcatt	atgaaccaac	catttttggt	actggcagct
720	catttctttt	taagtgcagt	actaaatatt	gatattctgg	caattttgag	ttattacagt
780	tctgatcttg	agatttaaat	acaagtttgg	gccctggact	aaggagcaca	tggtttgcaa
840	tgagccttaa	ttaacctatc	agcaagtcag	tgtgaccctg	tgacaagttg	agtttggaac
900	ttctgctctg	tttaaggtct	atagattgct	ggtggtttga	tataaattga	tttccttatt
960	cagtgatgtg	ggacgttttt	aaaaatatga	tctttccttg	ataatacatt	tgattccttg
1020	gcaaacatac	tctttttttg	cctgacatgt	ccccccagc	tttttaactg	gcatgcgttt
1080	tcagcaatta	tcactcaatt	catgtacttt	gatgaacatc	atcatactat	ataatgttac
1140	ctagtattat	tccccatgtt	cctcactcac	tttaacttag	aacaatcttt	tgaatccatg
1200	tatatctctg	atattcttta	ttatccataa	tctgatcatt	atagcagaca	tttgtaacaa
1260	atatttacag	atcgcaagtg	taattccatt	aaaaaaatga	gatgatatgg	aaagctatgg
1320	cctcataaat	cttccaattg	agggttcaaa	atatccagtg	atatcagtaa	taattcttta
1380	tgtcttctta	atctcctaag	aatcccgtaa	taattagtag	ttattatttt	gctacttgtt
1440	tgaaatgagg	attttgttta	tttccttgcg	tctttctttt	ttccctttca	atccgtatgt
1500	ctatggtaat	aattgcatcc	aagttttgct	gccacaattt	tgtagcattt	ttgtttcaca
1560	gacttgatga	tatgtctaga	atttgctagt	tgtttcttta	ctctatcctc	gtttgctttc

1620 gattgaaaca tggcttttgg catgaatgtt tcataggtta tgttgtgttc atttagtagg 1680 tggcgcataa tctgtggttt tctctctttt tgtggtatta gcagctgctg cagataaatg 1740 cattaattca tgatgcttct gatatgatga gtcatctttg tagagttact aagcattagc 1800 aaaggaggaa atgctatgta atagaaatat tattcaatgc caaaatattt tcttaaatag 1860 tcatagaact aacaagaaaa aatagacagc aaaaaaatgt gttggctgtt ctcactgttt 1920 atcttcctaa cttcttttga tgatggaagg cagttttgtg gaaattgcca gccaggactt 1980 tgacatgaaa cagacccagg gctaaatttt ggctctgtgg tgttggataa gtggccttga 2040 ataaattagt tattaagctt cagttttcta gcttttaact gattataaca atgcacacac 2100 atacctgaca cactgttaaa ttttcttctc ttcctgtttc ttatgttaag gaaagatact 2160 ctgtgttttg gcatatgttg gtgaatttgt accattttta tcctctcagt ccttcctttt 2220 ataagacaat aattggagta gtttaatctt attcatgtgc agataaaaga ggtttatgaa 2280 gtttagggtg aagtaggcaa gggaatctgt ttactccctc ttccctctac tgaataattt 2340 tccctctact gaataatttt ccctctaaga attgctgtgg gtaataccag gagtggggac 2400 attgcccaca tgcataagag cgtatctctc cattcgatca gtttgtcacc gtctttgctc 2460 tgttttgaaa gtcaggcttc tctgtgactg tgaagcctgc tgttccctga aaatctgata 2520 atggagcagt ggaggttttt ttctttctgt gctctgtaga tctcattgtt tgcacttgta 2580 atttcccaga gttgaaagga aagattgaac tggaatattg tgtaaactat ctgtcttaca ttagtgtagc attttgcaat ttggggaaca tcttcacaat ttgtgtctcg ttgttcagaa 2640 caaccetgtg aagtagtttt ggcaatgtct gtgttacatt tcatgtaatt tagccaacte 2700 2760 ccattccaac taggetttgg ctaaatctga caattttata tatagettaa aacaaagaat 2820 atacattett tteacecete ecagtetace catecageet teatgattea tteetgtgte 2880 aaggttagtc gctgtttccc atttgaattg gtttctttta tggtcagttt actttcttcc 2940 ctctccctc cctttcctgc acatccccat ccttgctatg cctttctgtc ctcttttata 3000 atggatatat ctttttcctg ccattatccc tcagacattc tcctcatggc acattttctt 3060 caaatgctaa catttactga gtgtacattg aagttctgtg catacaggaa gaagttattt 3120 tctgagctta gataatacta tgtgtatatg tgattaaaat gaagattatt ttctaaagcc 3180 ttcaaattag aagtggattt ctgtttcatt acttccgttt taaaagtttt tgccagagag 3240 ttttgctaaa tactctctta tttgctctag tgtactagtc cagtagtgtt tgcatgtgga 3300 tgtctgtgga tgacagttat tgtagcactt tggcagtgca ctaaaatttt gccactatga

aatgtttett tattgtgtgt gegtgtgtgt tttgaaatae geacacagee acacecacat 3360 atatattaaa agtggttgta tteatttagt gaaaaacaaa aagtagatgt acttetgtaa 3420 ateagataaa tgettggaat ttgattgtet acceaateaa eagtttteee tetttgetet 3480 ggaaatattt gtaeteatat ageatattte aaaaatgttg teatteatta aggeetetta 3540 aatagaeeae tatttttgt gtetggeaga tgagtatgte aaggattgag atgaacacat 3600 aagtettgga aattaaataa atttataaae ataaagat 3638

<210> 124

<211> 3862

<212> DNA

<213> Homo sapiens

<400> 124

60 ttggtttcat gaacggggcc acatatttcg ggaagcactc gggcattgtc accagctatg 120 gcaagtgtcg ctggtgtagt agcctctcca gcatgggcgg tgctggggct ttacagagga 180 ggctccggaa gcctgttctg gcaccactgg gttcttgacc tataatctat gctgagtact 240 gaagattttc ctatctactt tccttccttc tgtatgttca taatgcccca acaggctgtc 300 attgcagtag acagggcttt ccgggactta gagctccgct tcacacatct ggtatactgc 360 cctgttggct tgaacctctg aagagggca gggtaggaac ggtgactgct gtaaaggcac 420 agacctgcac ggccgggcga tacagactga gcaaagaaaa gagtacccgt tgaaggggtg 480 tccactcttt tggcttccct gggccacact ggaagaagaa gaattgtctt gggccacaca 540 tgaaatacac taacactaat gatagctgat gagcttaaaa aaaaaacaca aaatgtttta 600 agaaagttta tgaatttgtg ttgggctgca ttcaaagcca tcctgggccg cctgtagccc 660 atgagctgtg ggttgaacaa gtttgcatta gaaagtgaag aagtgggggc aagcccagtg 720 tcatggcttg acactggaag ccagtggaag gtgcccagga agagttgtgg ggaatgtcct tagactggca tcacacacc acgtgggatg gaaggtgtct tccttttgtc tcactcacgg 780 840 tggccctggc catctcctgc cagcggtgct gaaacagggc ctcctgcaga gactgcatgg 900 ctggtgactg gccctggtgt cttgcagact atgatgcagt gctcacggag gctggagatt

960 acacagaaaa atatctgaag cttcaaaaac tctttcaatc tgtctcaggt actcagcacc 1020 catttaactt acgggccagc cctcctcatg tggagtctct gttctgtgga aaagtgagga 1080 aggcgtgggt ctcccttgtg ggcagcagtt acaccaagct cctgagaaca agggcaacct 1140 taacttcgaa ccctgggctt aaaatctgtg tgatttttta aaatcagggt ttctaagcat 1200 tttataagcc tcagtttctt cactgaagca taaaggtagt aaccttggtc tcctgtgatg 1260 actgcgaaga ttgagttact ctttgtaaag ctcttatacc atggatgaca tagtaacccc 1320 caatatgaaa ggaaaagcca tgctggatag gcatgggggg cttagagaag gcagtggtca 1380 teteaggeae tttttgeeet gtgeeceate teeattgeag caacteeeet geecegagta 1440 cccaaacttc ctcccaaggc tgtgtatccc cccgtgagac cgtcgctgta cctcccgctg 1500 tgggacgccc tatcctactt aaatgaggtg cgtgctgcct ggccacagga ggcggagtgg 1560 ccattggagg gatggggag ggattccttc aggaaacttc ttattaggaa gtgggaaaac 1620 aaatcetetg cattteatte aaatttagaa etgtgggaca agageeacea geteetteeg 1680 ggtggactgt gaaggggttt gaccttggag tcagtgtgca ggggagggc agcaggacgt 1740 cggaggatcc cgggttcccg cttagatgaa cctgtctgga gatgctcttg tttggactgc 1800 gtggtcctta cggaatccac gtaggaaaag ctgctgagct ggaatcggga gactagcttc tgcccgtgct tcaccagcag ctgggcctga acttcctggg tcactgctcc cccttttcca 1860 1920 tcagccttcc tgtcctattt tgaagaaagg tgaaagctgt ttggaactga aactgtagcc 1980 cttggattca cattggtttt acctctgcta tcactatttt agagaaaagg tagtgactgg 2040 tacactaaag aaactacatt tatttaatgt aactaaattt aatttaatga aataaacatt 2100 tgcttggtgc ctcattcatt gctagacttc aactatttta gaatacaatt tatttactct 2160 tttttttttt tgagacaggg tcttgcttgg tggctgtggc tggaatgcgg tggcacaatc 2220 atggctcact gcagccttga actcctgggc tgaagcaatc ctccggcctc agcctcttga 2280 gtagctggga ttacaggagg gcaccaccac gcccagctac atttttaagt tttttgtaga 2340 tgtgggtctc actatgttgc ccaggctgct ctcaaactcc tggcctcaag tgatgcacct 2400 gctgcggcct cccaaagtgc tgggattaca ggcgtgagcc cctgcgcccc atccatttcc tetgttaate agttettagg attataacga ttgeteecte gteaceatge cetgeattte 2460 2520 cctgagtttc cttcctgggc agtggagacg taagcacaga gcagtgtcac atggcatctg 2580 tttcatcatt tcccattcga agaacccttg gggaccatta ggcaggacca aatgacaggg 2640 tettaggaag gaggateetg aetgeteage eettggaett etgetettge eattteteet

2700 catagecagt caggteget cagecegtea acatggagaa cetteccata aacaatggga 2760 geggeeagte ctatgggett gteetgtatg agaagteeat etgeteegga ggeegeetee 2820 gtgcccacgc tcatgacatg gcacaggtgt ttttggatga gacaatgata gggattctga 2880 atgagaataa taaggacctg cacattcctg aactcaggga ataactggat ctgtcagcat 2940 caataactct tccctggagg gctttaccat ctattccctg gagatgaaaa tgagcttctt 3000 tgagaggete egetetgeea eetggaagee tgteecagae ageeaceagg geeeggeett 3060 ctactgtggg accttgaagg ctggcccttc tcccaaggac accttcctga gcctgctgaa ctggaattat ggatttgtgt tcatcaatgg acgtaacctt gggcgatatt ggaatattgg 3120 3180 gcctcagaaa acactgtacc ttcctggagt ttggcttcat ccagaagaca atgaggtcat 3240 cttgtttgag aagatgatga gtggctcaga tatcaaatct acagacaagc ccacgccgta 3300 aaactgtgtc tgaacatttt tttttttttt tgagatggag tctcactttg tcgcccaggc tggagtgcag tggcacaatc tccgctcact gcaagctcag cctctcgggt tcacgccatt 3360 ctcctgcctc agcctcccca gcagctggga ctacaggtgc acgccaccac gcctggctaa 3420 3480 ttttttgtat ttttagtaga gatggggttt caccaagtta gccaggatgg tcccaatctc 3540 ctgaccttgt gatctgctct cctcagcctc ccaaagtact gggattacag gcgtgagcca 3600 ccactcccgg ccgtgaacat attttttggg ttgctggagt tcatctataa gtcatttttg aggaataaga tttatgttaa gactatcaaa cacagtgttg cctacaatag caaaaatgtg 3660 3720 aaaataacaa caacaacaaa acagcagagg aattgttatg tattttgtag tctatctata tgatgcctat ttttaggctt taaaaagtct tcaaaatctt taatgactga tttatctagt 3780 3840 taaatgctta atccttagca ggctcttatt ctttaattaa acgtgccttt gagtagatgt 3862 gaataaaata aaaacaagtt tc

<210> 125

<211> 4528

<212> DNA

<213> Homo sapiens

60 cagggagtcc cagtgaggta cagccccgtg gtggaggccg gctcggacat ggtcttccgg 120 tggaccatca acgacaagca gtccctgacc ttccagaacg tggtcttcaa tgtcatttat 180 cagagegegg tggtcttcaa gctctcaccc gaggacgctg ccatggctgt gctgacggcc 240 tccaaccacg tgagcaacgt caccgtgaac tacaacatca ccgtggagcg gatgaacagg 300 atgcagggcc tgcgggtctc tacagtgcca gccgtgctgt cccccaatgc cacgctggca 360 ctgacggcgg gcgtgctggt ggactcggcc gtggaggtgg ccttcctgtg gacctttggg 420 gatggggagc aggccctcca ccagttccag cctccgtaca acgagtcctt cccggttcca 480 gacccetcgg tggcccaggt gctggtggag cacaatgtca cccacaccta cgctgcccca 540 ggtgctgatc cgcagtggcc gggtgcccat tgtgtccttg gagtgtgtgt cctgcaaggc 600 acaggccgtg tacgaagtga gccgcagctc ctacgtgtac ctggagggcc gctgcctcaa 660 ttgcagcagc ggctccaagc gagggcggtg ggctgcacgt acgttcagca acaagacgct 720 ggtgctggat gagaccacca catccacggg cagcgcaggc atgtgactgg tgctgcggcg 780 gggcgtgctg cgggacggcg agggatacac cttcacgctg acggtgctgg gccgctctgg 840 cgaggaggag ggctgcgcct ccatccccct gtcccccaac cgcccgccgc tggggggctc 900 ttgctgcctc ttcccactgg gcgctgtgca cgctctcacc accaaggtgc acttcgaatg 960 catgggctgg catgacgcgg aggatgctgg cgccccgctg gtgtacgccc tgctgctgca 1020 gegetgtege eagggeeact gegaggagtt etgtgtetae aagggeagee teteeggeta 1080 cggagccgtg ctgccccgg gtttcaggcc acacttcgag gtgggcctgg ccgtggtggt gcaggaccag ctgggagccg ctgtggtcgc cctcaacagg tctctggcca tcaccctccc 1140 1200 agageceaae ggeagegeaa tggggeteae agtetggetg eaegggetea eegetagtgt 1260 gctcccgggg ctgctgcggc aggccgatcc ccagcacgtc atcgagtact cgctggccct 1320 ggtcactgtg ctgaacgagt acgagcgggc cctggacgtg gcggcagagc ccaagcacga gcggcagcgc cgagcccaga tacgcaagaa catcacggag actctggtgt ccctgagggt 1380 ccacactgtg gatgacatcc agcagatcgc tgctgcgctg gcccagtgca tggggcccag 1440 1500 cagggagete gtatgeeget egtgeetgaa geagaegetg cacaagetgg aggeeatgat 1560 gcgcatcctg caggcagaga ccaccgcggg caccgtgacg cccaccgcca tcggagacag 1620 catcctcaac atcacaggag acctcatcca cctggccagc tcagacgtgc gggcaccaca 1680 gcgctcagag ctgggagccg agtcaccatc gcggatggtg gcgtcccagg cctacaacct 1740 gacctctgcc ctcacgccca tcgtcacgcg ctcccgcgtg ctcaacgagg agcccctgac

1800 gctggcgggt gaggagatcg tggcccaggg caagcgctcg gacccgcgga gcctgctgtg 1860 ctatggcggc gccccagggc ctggctgcca cttctccatc ccctaggctt tcagcagggc 1920 cccggccaac ctcagtgacg tggtgcagct catctttctg gtggactcca atccctttcc 1980 ctttggctat atcagcaact acaccgtctc caccaaggtg gcctcgatgg cgttccagac 2040 acaggeegge geecagatee ceategageg getggeetea gagegegeet caeegtgaag 2100 gccgctacct gtctgaggaa cccgagccct acctggcagt ctacctgcac tcggagcccc 2160 ggcccaatga gcgcaactgc tcggctagca ggaggatccg cccagagtcc ctccagggtg 2220 ccgaccaccg gccctacacc ttcttcattt ccccggggac cagagaccca gtggggagtt accgtctgaa cctctccagc cacttccgct ggtcggcgct ggaggtgtcc gtgggcttgt 2280 2340 acacgtccct gtgccagtac ttcagcgagg aggacgtggt gtggcggaca gaggggctgc 2400 tgcccctgga ggagacctcg cccgccagg ccgtctgcct cacccgccac ctcaccgcct 2460 teggeaceag cetetteatg ecceeaagee atgtaegett tgtgttteet gageeaacag 2520 cggatgtaaa ctacatcgtc atgctgacat gtgctgtgtg cctggtgacc tacatggtca 2580 tggccgccat cctgcacaag ctggaccagt tggatgccag ccggggctgc gccatcccct 2640 tetgtgggca geggggeege tteaagtaeg agateetegt eaagaeagge tggggeeggg 2700 gctcaggtac cacggcccac gtgggcatca tgctgtatgg ggtggacagc cggagcgcc accggcacct ggacggcgac agagccttcc accgcaacag tctggacatc ttccagatcg 2760 2820 ccacccgca cagcctgggt agcgtgtgga agatccgagt gtggcacgac aacaaagggc tcagccctgc ctggttcctg cagcacatca tcgtcaggga cctgcagacg gcacgcagca 2880 2940 ccttcttcct ggtcaatgac tggctttcgg tggagacgga ggccaacggg ggcctggtgg 3000 agaaggaggt gctggccgcg agtcacgcag ccctgttgcg cttccggcgc ctgctggtgg 3060 ctgagctgca gcgtggcttc tttgacaagc acatctggct ctccatatgg gaccggccgc ctcggagctg tttcactcgc atccagaggg ccacctgctg cgttctcctc atctgtctct 3120 tcctgggcgc caacgccgtg tggtacgggg ctgttggaga ctctgcctac agcacggggc 3180 gtgtgtccag gctgaacccg ctgagcgtcg acacagtcgc tgttggcctg gtgtccagcg 3240 tggttgtcta tcccgtctac ctggtcatcc tctttctctt ccggatgtcc cggagcaagg 3300 3360 tggctgggag cccgagcccc acacctgccg ggcagcaggt gctggacgtc gacagctgcc 3420 tggactcatc cgtgctggac agctccttcc tcacgttctc aggcctccac gctgaggtga 3480 gggctctact gggggtcctg ccgccttggc gcagcttgga ctcaagaccc tgtgcacctc

tcagcaggcc	tttgctggac	agatgaagag	tgacttgttt	ctggatgatt	ctaagagtga	3540
ccttgaggaa	ccctgggagc	tcaggaagga	aggagcaccc	agaagcaggg	acagggagct	3600
ggttggggag	gaccagaaat	caggttatca	atactctggc	tgaccatcgt	catcgtggga	3660
ctgactttgg	tggaagtcct	tggttactta	tcattactgt	gtttctgaga	agttataaat	3720
ttgccatctc	cctctgcaca	agttaccttt	gtgtgtcttt	cctgaagact	atcttcccgt	3780
ctcaaaatgg	acatgatgga	tccacggatg	tacagcagag	agccaggagg	tccaactgcc	3840
gtagacagga	aggaattaaa	attgtcctgg	aagacatctt	tactttatgg	agacaggtgg	3900
aaaccaaagt	tcgagctaaa	atccgtaaga	tgaaggtgac	aacaaaagtc	aaccgtcatg	3960
acaaaatcaa	tggaaagagg	aagaccgcca	aagaacaatc	accccttctg	caagaaagcc	4020
tctttgcaac	cgggtcagaa	tggcggcagt	ggagcatcgt	cattcttcag	gattgcccta	4080
ctggccctac	ctcacagctg	aaactttaaa	aaacaggatg	ggccaccagc	cacctcctcc	4140
aactcaacaa	cattctataa	ttgataactc	cctgagcctc	aagacacctt	ccgagtgtgt	4200
gctctatccc	cttccaccct	cagcggatga	taatctcaag	acgcctcccg	agtgtctgct	4260
cactcccctt	ccaccctcag	ctctaccctc	agcggatgat	aatctcaaga	cacctgccga	4320
gtgcctgctc	tatccccttc	caccctcagc	ggatgataat	ctcaagacac	ctcccgagtg	4380
tctgctcact	cccttccac	cctcagctcc	accctcagcg	gatgataatc	tcaagacacc	4440
tcctgagtgt	gtctgctcac	tccccttcca	ccctcagcgg	atgataatct	caagaaacta	4500
aggaagaata	aataaataat	ataaaaat				4528

<210> 126

<211> 1023

<212> DNA

<213> Homo sapiens

<400> 126

ggctgatatg ccaaagtcac ctttcaaaag gaaaagaact accaatgaaa taaaaaatct 60 tcagtaccta cctcgaacaa gtgagccccg tgagatgctc tttgaagaca ggacaagagc 120 tcatgcagat catataggac aaggttttga acgacagact acagctgctg ttggagtgct 180

gaaggctgtg	cactgtggag	agtggcctga	tcaaccccgt	ataaccaaag	atgtaatttg	240
ttttcatgct	gaagatttct	tagaagtagt	tcaacgaatg	cagttagatt	tacatgaacc	300
tccactgtcc	cagtgtgtcc	aatgggttga	tgatgcaaaa	ctgaatcaac	tgaggaggga	360
aggcattcgc	tatgccagga	ttcagctata	tgataatgac	atttatttta	ttccaaggaa	420
tgttgttcat	cagttcaaga	cagtttcagc	tgtatgcagt	ttagcatggc	atattcggct	480
caaattatat	cactcagagg	aggacacttc	tcagaataca	gctactcatg	aaacaggcac	540
atcatcagat	tccacatcat	ctgttcttgg	acctcacact	gacaacatga	tttgtgctgt	600
aagcaaagcc	tccttggatt	ctgtttttc	agataaactt	cattctaaat	atgaattaca	660
gcagattaaa	catgaaccta	ttgcatctgt	aagaatcaag	gaagaacctg	tgaatgttaa	720
tattcctgaa	aagactacag	cactgaataa	tatggatggc	aagaatgtta	aagcaaaatt	780
ggatcatgtt	caatttgcag	aatttaagat	tgacatggat	tctaaatttg	aaagtagcaa	840
caaagattta	aaggaagaat	tgtgccctgg	aaatctaagt	ctagttgata	caaggcaaca	900
cagttcagca	cattcaaatc	aagataaaaa	agacgatgac	attttgtgct	aaatttgcat	960
ataccatcta	aaatcctttt	ttaaaaaaaat	ttaatgtaat	aaagattcat	gaattctgaa	1020
agc						1023

<210> 127

<211> 4370

<212> DNA

<213> Homo sapiens

ctgagcaccg	cgcgcaaagg	cccggcccca	gggccaggca	actccagcgc	cgaggccgtc	60
cagtgcggct	ggagggcaga	ggccgagagg	cgcggcgcgg	aacttgagcc	ccttgtcccg	120
gcgcaccggg	gaaccatgag	ggatgttaag	cgagggagtg	gaattacccc.	ccttttttt	180
ttttctttt	ggagacgtag	tctcccctg	tcgcccaggc	tggagtgcag	tggcgcgatc	240
tcggctcact	gcgacctgtg	cttcccgggt	tcaagcgatt	ctcctgcctc	agcctcccga	300
gtagctggga	ttacaggcgc	ctgccatcac	gcccggctaa	tttttgtatt	tttagtagag	360

420 ttggggtttc accatgttgg tcaggctagt ctcaaactcc tgacctcagg tgatccctgc 480 ctcggcctcc caaagtgctg ggattacagg cgtgagccac cgcgcccggt tggaatgacc 540 actttttagg acctcttccc tgccgcgcag agactggagg gagcggggcc cgcagtgcag 600 ggatgaggtc ccaggtctcc ccgctgcgct gcttgaggct cggccatggc ccagcagaga 660 gccctgcccc agagcaagga gacgctgctg cagtcctaca acaagcggct gaaggacgac 720 attaagtcca tcatggacaa cttcaccgag atcatcaaga ccgccaagat tgaggacgag 780 acgcaggtgt cacgggccac tcagggtgaa caggacaatt acgagatgca tgtgcgagcc 840 gccaacatcg tccgagccgg cgagtccctg atgaagctgg tgtccgacct caagcagttc 900 ctgatectea atgaetteec eteegtgaac gaggeeattg accagegeaa ecageagetg 960 cgcacactgc aggaggagtg cgaccggaag ctcatcacgc tgcgagacga gatctccatt 1020 gacctctacg agctggagga ggagtattac tcgtccagct caagcctttg cgaagctaat 1080 gacctgcctc tgtgcgaagc ttacgggagg ctggacctcg acacagactc tgctgatggc 1140 ctctcggccc ctctgctggc gtccccggag cccagtgctg gccccctaca ggtggcagcc 1200 cctgcccact cccatgctgg tggccctggc cccactgagc acgcctgagc ctccggggcc 1260 acgcttcgtt ctcaggaaca aaacctgagg cagccctttg gatgccctca cagccttgct 1320 tctctcagcc taggttccca tttggggact tcaggacccc agagccacta ggacttcctt 1380 gggaagcccg ttagcccagg gtgggtcccg ccaggacagt agggaaacag ttgtttccct agccatttcc gaatagccca tcattccgag tcatcatctc tgtttgctgc cttcctggcc 1440 agccaggtgg aagaaagttt ccaagctagg tctggcccgt tgggggatctc agcagtgggg 1500 1560 caggagggtg cctgatttcg gggagtcctg acccgagcct gttgtcagag ttgggagggg 1620 ctctgagcag tgttgggcag gccgggtctc ccatcccgag gccagcgttc ctgtgcagag 1680 ccccatccac tggttcttgc cctgagccac atatgtctgt gccatgggct gagtgccacg acaggcccgt gtgacagctg ctgcccacgc atgtggaagc taggtgggac tcattcctaa 1740 1800 ttctgccgtt gtaatgagac ttgattaaaa caccgccact tttttgcatt gctgctcttt cttcctcatt ccttgtcagt ccaggaccat ccttggtctc ccagcagttg tccgagcagc 1860 agetectcag etetgeetgg acageetgge ecaaggteae teteteeta ttggeaeetg 1920 1980 gtaggtcccc agtattcagt gaatggacct gctgccatca ttgcacatcc aggcacctgt 2040 gcctctgctg gcatctcatc ctcactgcta ccagagccgg tgctcctagt gccggtattt 2100 tagagaggag aggatgtgga cttagaaggg gtgaggtgta ccacggccac agagctagga

agtgaagtgg caggaatcag aacttgaacc tgatggaagt ctagacccag tgtcttttgg 2220 tgccaggctc accttagaaa tgcagaagtc acaacactgg gcaggaagtg aggggggagc 2280 acagttcgtc cacaggaagt gtgggggagc accccaccc agttcctcca gcaccatcca 2340 tgtgcttcat cttctcatgg gggaggccat catctttccc gatgtatgaa tgaggtgaca 2400 gcccaggatc cagccttggg gacaggtaag aacacagctg acccatcacc acctgaacca 2460 2520 ctctggacct ggcttctggg gtggcctagg gaagttgctt cccctctgag ggagaatttc 2580 cccattgata cgtgtggtga tctgttcccg cactatttta gctgtggaaa tgccttgtac 2640 ttaaccactg aggaagaaaa agattacaac cagatggaag catatatgaa gcgagagccc 2700 ggaaggaact ggccagactt tgtggtggga tcccacttac cctgttccta aaatcctgag 2760 cgataagacc tgccatcagc ttcattttct gcttggccag gaccatcatt cccatgtgaa 2820 aatcaagtta tttctccttc ttaaagccaa gccgctctgc tgaccttttt tcctctccag 2880 ctcatggcct tggcagcaga gctccacggg gaagcagctg ataaccattt gcagttctct 2940 cttgggccta cgtcagacag gttttgtctc catgactcta gcaaaactac acctattaag 3000 gtcaccagtg gcctccacat tgctaagccc cggcccattc tcagtccatg taactctttt 3060 atcccaagct ttttattttg agggcagtgg aactcatgga agtacttgtc agtttgcctc 3120 tctgagcaca ttctccttcg tccatcacca caaccagaat ggatgatgat tgcatatcct 3180 ctggtatcta gctgtattca gatttcttca gttgttcccc aaatagtttt tttaatgcct 3240 atttttttt tttctagtcc agaggtcttt tattttttta acacccacga tgccatgaat 3300 tcatagggaa gaggttccag cagctcaggc tccttcccat tggttctcac agtgtgctgc 3360 tctgggtgga gcaggctggc gcttcagttg aatccaggta cctttctctt tggcttccct 3420 ctttttctga tcattttcct tcacgcgttt caggaagctc tctcggctct tagagtgctt 3480 agtgtgctga atatgcacat tcattctctt ggcaagaatc ttgcccttac ttgtttacaa 3540 cagtgccaac agcatgctgg ggaacactgt agactctccc agtctagcca tggtgacatt 3600 tgtggggcat tcctttttga acagtaccca ttcccttgat atctacaata tcacctttct 3660 catcaatttg catatacttg gccaaaggaa caactgcatg ttttctgaaa ggcctagaga 3720 acatatattg ggtgcctctc ctctttccct ttgtgttcgt cattttggcg aattactgga 3780 aggtggcggt tccagctgaa aggcttttat gcctgttttt attgtgtgtt gcatttggtt 3840 gttattttgg agtcttaaaa tctaaaacag gaccaggtca ggcccagtgg ctcctgctgt

3900 aatcccagcg ctttgagagg ccaaggcggg tggatcactt gtggtcagaa gttttgagac 3960 cagcctgggc aacatggaga aaccccgtct ctactaaaaa gtatagaaat cggccgggcg 4020 cggtggctta cgcctgcaac cccagcactt tgggaggcca aggcgggcgg atcacctgag 4080 gtcgggattt ccagaccagc ctgaccaaca tggagaaacc ctgtctctac taaaaagtat 4140 agaaattggc cgggcgcggt ggctcacgcc tgtaatccca gcactttggg aggccgaggc 4200 gggcagatca cctgaggtcg ggagttccag accagcctga ccaacatgga gaaaccctgt 4260 ctctactaaa aatacaaaaa ttagccgggc gtgctggtcc atgcctataa tcccagctac 4320 ttggtaggcg gaggcaggag aatcgcttga acccgggagg cggaggttgc agtgagccga 4370 gatcgggcca ctgcactcca gcttgggcaa caagagcgaa actccacctc

<210> 128

<211> 3586

<212> DNA

<213> Homo sapiens

<400> 128

60 gaccetgget gggagegegg eggtgeegge gggaggeega geggggeteg acagageagg atcgagatga ccacagccac ccctctgggg gataccacct tcttctcact gaacatgacc 120 180 accaggggag aagacttcct gtataagagt tctggagcca ttgttgctgc cgttgtggtg 240 gttgtcatca tcatcttcac cgtggttctg atcctgctga agatgtacaa caggaaaatg 300 aggacgaggc gggaactaga gcccaagggc cccaagccaa ccgccccttc tgccgtgggc 360 ccaaacagca acggcagcca acacccagca actgtgacct tcagtcctgt tgacgtccag 420 gtggagacgc gatgacctct accctggcgc tatctccacc actgtccaaa gagcctctcc 480 agagtcaaga cccagaggca cactetetgg cagettcaca atgagettet tetggtcagg 540 tcgacagaga catctttgac gcaatctctg atgcttccag caatcctcaa ccttgtctgc 600 cetgecetae eccaactgtg tecacatece tgeegeeaee ecaceaaaaa getgeagaae 660 attettttgt catetgatga ggtagageta tgttgggaat ccaccaatgt gggettgget 720 ttcccccaca ctgtagttag acagatagac agatagccca ggagccaggt gtcagggagc

780 actgctgaga gtatcacaat aggatctgtc acggggttca tatcagatga agcgccgtat 840 ccactgcttc acagagcaaa acattcaatc ccataaccag gcacagggga actaacttgg 900 actaactaac cagaaaacct tgttaacgta taacttgttc cagtactaca tctctgcctg 960 ctggctcatg acaattgctc agcacatttt cccctcttga agaaaggttg caagaagaac 1020 taaattatcc tcaaaagatt tctgcttcat tagtaaagag tcagtgatgg aatagggtga 1080 ctctgcagaa tagtggcctc tagggtagga gcttgttgtg ttgtccgtgg gcctggaatg 1140 atcctggtgg ctgatcaggg tccttctccc actctgggct gtatcaaccc tgacggtctt 1200 ggtctttggc tcccctttat ctggattctg agcacgctga ctgtcctgtt aatgccttcc 1260 ctccaaggac cagtatttgg agattaatta gattacaact ctatctatgt tacctttgtc 1320 cttcctggtc accttgcaga ttcaagacat gttcaaagca acacattcac aacccatttc 1380 tattctatag caacctcgtc tgtgactcct tagcctggag aacaatctac caagaagaga 1440 aagtatctgg aattaagaag tcctaccatc caagccctac ttcctggttg tgtggccttg 1500 gaaaagtgac tcaacctctt tatattcagt ttcctaacca tgaagtggaa atgataacac 1560 ctgcctcatt ggggcactat aacaagtgaa ggacttagga aaacatctgg agtatagcgc 1620 ctggcaccca ggagatgctt aataaatggg aaccaggatt ctttttctt tctttttct 1680 tttcttttt tttttttt tttgagacag ggcctcaatc tgtcacctgg gctggagtgc 1740 agtggcacgc tcacagctcg ctgcagcctt gaactcctgg gctcagggga tgctccctcc 1800 tcagcctcca gagtagctgg gactacaggt atgtgtcacc tcaccaggct aatttttta ttttttattt ttgtagagat ggggtctcgc tgtgttgccc aggctggtct tgaacccctg 1860 1920 gcctcaagta atcccagcac tttgggaggc tgaggcaggc gggtcacttg aggtcaggag 1980 tttgagacca gcctggccaa catggcaaaa ccctgtctct actaataata caaaatttag 2040 ctgggcatgg tggcatgcac ctgtaatccc actactaggg aggctgtggc atgagaatca cttgaacctg gaaggcagag gttgcagtgt gccaagatcg tgccactgca ctccagcctg 2100 2160 ggcaacagag tgaaactgca tctcaaaaaa agaaaaatcc attatgaggg gaaatcaaga 2220 gtcagggagg taagaggtct tacccagggt cacacagctc atgatatccc actgtaaaaa 2280 tactccgtgg aatagctctg gagaaatact ggcacattct tcctctctgg tcattatttc 2340 ttcctactgt gtttaaatat ccaccaagtg tcaaggactt tgtaagatgc tttcacataa 2400 attatctcat aggattaaat tttcccaaaa acctggggag gaattatttt ttccaaaaca 2460 gatgataatt tctgattcaa agagaaagaa aacaaagtac ttttccaaag tcacacagct

agtaagtcac	aaagacaaga	ctcaaaacca	ggtctcttga	ctccaaagtc	tgtctttttt	2520
gtgaagtcac	actcctctgc	tggcccagct	caaagcagca	cagattcttt	atgggctgaa	2580
caaggggagt	acgggtttgt	ccatgtgttt	gagtagagat	cagggttctg	gcttccaggc	2640
tgaaggtgag	ggaaaagcca	cttctaactc	ctttgggcat	ccatgctcac	ggccaaaaga	2700
gccccttctc	aacacatcca	agtgctaagg	attcctgctt	cattcaagct	actacttagg	2760
cccaaggagc	aaggggtaga	atggcatcta	accagagcaa	agccatttct	ttgagggctc	2820
aagccataaa	caaatatgct	cccctaaaca	tattcggctt	gaaaaagttg	ttttggggca	2880
gctgtggtgg	tgcacccctg	taatcccagc	cctttgggag	tcagaggcag	tcagtcactt	2940
gagcccagga	gttcaagact	agcctgggca	acacggcgaa	acctcgtctc	tacaaaaaat	3000
acaaaaattg	accaagcgtg	gtagtgcacg	cctgtattcc	cagctacttg	ggaggctgag	3060
gtgggaggat	ggcttgagcc	tgggaggcag	aggttgcagt	gagctgagat	cgcgccactg	3120
cactccagcc	ggggtgacgg	agccagaccc	tgtctcaaag	catatttcaa	ccctaaaact	3180
agactcttct	gcccacagtg	cagtcttcta	agggttaccc	tctggtatat	gttcttttgc	3240
taaatgaagg	cttggagttg	gagggaagaa	ggggagatgg	agtggtgagg	gcgagtcaaa	3300
taaaaggatt	tgagtgtctc	gtttttgact	aatgaagatg	attcaataaa	catcctgtaa	3360
gaagggttcc	tatgtgcaag	ttgaggtgct	actaagtaca	ttaagacaca	attgctgctc	3420
tcaaggagtt	agcagctggt	ctcatgcagg	gatctcacca	cgtggttatg	tattttgttt	3480
ctgatgagġt	gcctttctta	gcagatgctg	ccttatttgg	ccactgaaac	aatcaaagct	3540
aataaatgct	taaagaaaaa	tatctgacaa	taaaaaggtt	taaatc		3586

<210> 129

<211> 4136

<212> DNA

<213> Homo sapiens

<400> 129

acaagagaca atgacaaata tgagcctgaa ggaagatgag ctgatggcat tcccagctta 60 ttaccactcc ttgggggcct tatcttacat acatggattc aattcgtaga ttcagctggg 120

180 atttactgcc tcaagatggt tatgttggag gattccaata gttctactgg atgtggagcc 240 agaaattgtg tggaatgcct ggtgtttctt tcagttcttg gatgccaatc tgagaggaaa 300 ggccagatga ggacacagca agcaggcaga tggctgcgag ctggaaggga agcgtcatca 360 gaaaccaacc ctgagggtac cttgatcttg gacttccagt ctccagaact gcccctggca 420 gctcgtggtt ggcaagagca cgaacccgtg gtcagatgca acgtcctgcc tcatgcattt 480 tcctcttggt gctttggtca gaacttcccc aagtggagtg aaactcagga gctgagaaac 540 cgagtcactg tgaaaagatg ggaaattatc tcctgcgaaa actcaggcag gaaatgacta 600 catttgaaag aaaacttcaa gatcaagata agaaaagcca agaagtttca tccacttcta 660 atcaggaaaa cgagaatggc agtggttctg aagaagtgtg ctacactgtc attaatcaca 720 teccecatea gaaateetee etgageteea atgatgatgg etatgagaac attgaeteee 780 tcacaaggaa agtgagacag tttagagaaa ggtcagagac agaatatgcc cttcttagga 840 cttctgttag taggccttgt tcctgcaccc atgagcatga ttatgaagtt gtgtttccac 900 actaaaatcc tcaagctgct ttatcacctt ccagcaatga agacaatgca gaatagcaga 960 ctctggcgaa gttgttcacc ctgagcagtg catgaaacat tcctttctgg ctaaagttta 1020 gaaatattat cttattatat atccttaggc aactctgata tgtggcatct ctgtggctta 1080 ggtgaaatca tagaaattga cacaatgacc taaaatattc tatgtgtttt tgcttgtaaa gtttgaggac atggaggtga taaaaaaaac tttcttagga caataatgta aaatgaaaat 1140 aaatttctaa tcccctgac taactgaatg gaccctcttc taggccaaag agacctcaga 1200 tgaacctgaa agactgaatt ctggccatga taggaaggga ggtgagacac accttgttat 1260 1320 accccttccc ttttggagtt tatgcacaag tgaccaggat gagtcataag actgatgaaa 1380 tagactgatt gtggcaataa gagtcccaat tccaacctga ctctggtgta gatcacacac 1440 tgtctgaggg attccatcta tgagactttg tctacataac agagaccttg gtttccacaa cccctttatt ttagctaaag cattcttttc tactgacttc ttaagtcttt agacaaagct 1500 1560 taactettte aaccaattge caatcagaca aactttgaat etacetatga eetgtaaget 1620 ctctcctgct tcaagatctt gcctctttaa gctgaaccga tgtgcacttt ccatttaatg atttatgtct ttgcttgtaa ctcctgtctc cctaaaatgt ataaaagtaa acggtgacct 1680 1740 gaccacctca ggcacacttt ctcaggacct cctgagagtg tatcccaggc catggtaagt 1800 catgttggct cagaatcaac ctctttaaat attttacaga atttgggttt tggttaccaa taagteteea caaatatatg teeaagaate tteaatteea ageetgetea eeaaatttea 1860

1920 aatgccaaca tctccccatc caattaccta tttcatcttt gaggtgtaat ctactcaata 1980 aactgtgtaa gaccagtgac cagacccttt gctaacctga catttacttc aatttttctt 2040 tttctatgta ctggatattt ttgcatataa acttgcagta atagttcaaa aattaatagt 2100 ttttgacatt ggcttttctg agaagagaaa ttgaaagtgt cacaaaataa aaaaagatga 2160 aatgaagcat atataattgt caattttttc aattttctag ccaacagaga atcgaaggat 2220 tctgttcaaa tattagtaaa aattgaaaat aaacttgtgc ttatattttg tttgcaacac 2280 actagttaat ttaacctgtg actagttatc tctaccgaag gtggatgtgt agtttctggt 2340 tttaaaattc aagcaaactg gaaaataatc catctaatta tgctttcttt cccaagaagt 2400 tttttaatga tatgccagct tcctaatttg gagacaaaag ccttaattga caatgcattc 2460 attatatatt tttttgtata gttacagtat acgagttgag tatcccttag atgagatgct 2520 tgggaccaga agtgttttgg atttcagatt tatttttgga ttttggaata tttccataca 2580 tataatgaga gagttggaaa atgggattca agtctaatca taaaattcac ttatgtttga 2640 tatacacctt atctgaatag cctgaaggta attttataca atattttaaa taattttatg 2700 cctgaaacag agtttgcgca cattggacca tcagaaagca gaagtgtcac tatttcaagt 2760 cagtgctcaa aaagtttcag atgttaagct ggtgatgcag ttcatgccag tgatccgagt 2820 actttgggaa gccaagacag gtggatctct tgagcccagg agtttgaggc cagactgcac 2880 aacacagtga gacctcgttt ctacaaataa ttaaaaaatt agccaggtgt ggtggtgcac acctgtagtc ccaggtactc aggaggctga ggtagtagga ttgtttgaga ctgggaggtt 2940 gaggetgaac tgagecagga tettgecace acattecage ttgggeaaca gagtgagace 3000 3060 ctgtctcaaa aaaaaaaaaa aaaaaagttt cagattttgg agcatttcag atcttcagat 3120 tagggatttt caacctgtac tgacctttta gtcattgaca agcattaatc aataggtgga 3180 ctccagataa ctcatttgct gtatacacat tttgcctctc tattcaacga attcttatgc 3240 cctcttgtgg tgattttaat gtgcggaagg gaaacaatag aaattttgca attctagaaa 3300 agtcattctg tcaaaatatg tcagtcctgt agatattagc caattttagg aaaatgacaa 3360 aattttttac ttttcgtctg cctttgtagc tgttttatga tataaatacc ttatttgtaa 3420 taaaattaat tttaatttga gtaacaatct ggaattatca gagaaggggc aagcaatagg 3480 ttaataaaca gtattgattg gtagaaggaa cgttgaaatc caagagcatc aatgtcttct 3540 ggtggttcac cataagccac agcagatgtc ttaatctttc cgagatctag tttttcagca 3600 aagcaggatt taagaaatgt aactatctta tgtggttatg aagaacaata gaatcattgc

3660 tgtataagtg ctttttaacc tgtaaatttt gtgaagctta tcttttatgc atataaatat 3720 ttgaacattt tacattgttt atatttttaa tcagttttac tcaagtgtga ttatatacaa 3780 gaaaatgtaa ccactgtaag ggtagagtta taagaatttt gtcaaatgta ttcacccatg 3840 tagtcacctc cttatgaaga gacagaacac gtacatcctc ccagaaagtt ccacagtgct 3900 cettttecet gagttteace agteetggea accaatgate tgettegtat aattataact 3960 gttctagata tttgtagcaa tgtacccttt ccatatttat tttgtgtgtg taaggcttct 4020 tttagtcatt ataatatttt tgagattcat ctatgtttaa tgttctatca gtagttgtac atcttacttg tctcagcata tcaccatata gatatactat aatttgttaa tctaatcact 4080 4136 gatggatatg taggatattt aagtttttga cattatgaat aaagtggcta taaatg

<210> 130

<211> 4910

<212> DNA

<213> Homo sapiens

<400> 130

60 ttcaaaataa agaatttgaa aatataataa ggaaagagtt tcaaattatt ttctggtgta tgcagtagtt tcaaagaggt ttttttaaaa ataaaattgt gatgagtttc tttaaaatgg 120 180 tatagcaaca cgaatcatat gtagatgatc ttaaccaatg agagcatgtg tatgtatgtg 240 taaaatgaat taaatcaaat aaatggttgt aaatcaagta agttgtaaat aaatgaagta 300 catggttgct tttttatgtt ctccatatgt attttcaagc tctcaaagat ccagttgttc 360 ttacttctca gggtatgttg ctgaacttcc aggaatcatt cccgtcttta gtccagtgtt 420 gctgttctag tctcattgga agtgacctgt ccactgactc tcatccccaa gttcctaatt 480 tgccagcaga atggtactgg ccctgtgtct agtgatccca gggataaaat gctgttgtct 540 agtatcattg acttaaaaaa aagaaaaaaa atccctgttt tatttgtttt ggtcagctca 600 agttcaggac tgttagataa cttaaaatct gctttgcaca gatgtatttt taaggaacaa 660 acatctacag taacagttac agatttcctt aagtgggata tttgagttca tagatggtag 720 acttttatag cctgggcttc taaggagggc agcagactag tgcagtcagg acaggacatg

780 ggctgtttgg ggtataataa tagtgagtat agtgagattc cacatgatgg aatctcaaca 840 aagagtagga aggcgtttag gccttcagtt gtccttgaat tgagtatgtt ctctcttttg 900 tttaatgtag ataaaaatct aacacaagat actaaaacat acaaggtaga atttatactt 960 tttttattca cagaaaatca tgtaacttcc tttgcgggta actcattctt tcacagcata 1020 catgaacacc gtagttattc cctagtttcc agtttataaa gatgttttga gaggaacatg 1080 ttcaaaatat ttaactagta ttttgcacat gggacaagaa gatcttaaat acatgtttca 1140 agagtttttc ccccactagt tagtatttgg aaacatggga atgtttgtat taaatattac 1200 tttaaataag tagttttcgc accagacaat tgctgtacca taaatatctt aaaacttaac 1260 attgttttt taaatttcta aaattgaatt atagaattca agaaactgtg tgacaaatga 1320 aaatgccttt ttacaaaata aatatctgaa tatgtgatat attattgatc attagtttgt 1380 aacactttta agaatattct ttgaacttac attattagaa acagcttaga aggaactggg 1440 cgccgtggct cacacctgta atcccagtgc tttgggaggc tgaggcagat ggatcactag 1500 aggttaggag atcgagacca gcctggccaa catggtgaaa ccccatctct actaggagta 1560 caaaaatgag ctggcgtggt ggcgagcgcc tgtaatccca gctactcggg atgctaaggt 1620 aggagcattg cttttcgtgg tgaaagaggc aatgatgaat ctgccatcga aatgattaaa 1680 gtatctcatt tgaagcagta tttggcagtc gtattcagag ataaacccct ggagctatgg gatgttagga cttgtaccct tcttagagag atgtccaaaa acttccctac aataactgct 1740 1800 ttggagtggt caccatctca caacttgaag agcctgagaa agaagcaact tgcaactcga gaggecatgg cccgccagac cgtagtetea gacacagage tgagtattgt tgaateatet 1860 1920 gtgatcagct tgctgcagga ggcagaaagt aaatctgaac ttagtcagaa catctctgcc 1980 cgggaacatt ttgtatttac cgatattgat ggccaagtgt atcatctcac tgttgaagga 2040 aactcagtaa aaggcagtgc tcggattcca ccagatggaa gtatgggtag tattacctgc 2100 atcgcttgga aaggtgatac attagtgctt ggagatatgg atggaaattt aaatttctgg 2160 gacttgaaag gcagagtatc caggtataag ccaagaatga aatcttgtta tttcattaaa 2220 aaaaagaaat gaaatetttt tgttttgttt tgttgagatg gtgtcttget etgtegeeca 2280 ggctggagtg cagtggtgca atctcggctc actgcaagct ctgactcccg ggttcatgcc 2340 attetectge eteageeace egagtagetg ggaetaeagg eacceaceae eacgeeegge 2400 taattttttt gtatttttt agtagagacg ggatttcacc atgttggccg ggatggtctc 2460 gateteetga eetegtgate egeceacete ggeeteecaa agtgetggga ttacaggeag

2520 gagccagcac acccggccaa aaaatgacat cttgatatgg ttccattaga ggcttgtgac 2580 ttggcaagaa ggatcagtaa actcgtggag gtgtagcttg gacccttggg tcccttcacc 2640 taaacttggg aggatgggcc ttgagccaag cattcttagg agatagttat ctgcaagtgg 2700 cccctgcaga agtcttagct gaccttaaag ggcaggccct ttctgtcaga tgtggccccc 2760 agtcccagca agtaaagggt tctcccatca tcagacctgt tagaaatgga aatagtgaga 2820 gatgttagac atagcttctg gtgaccagat ctcactctac attgtattga tgtttttgtt 2880 tctttgtctt cagaggaata cccacacac gaagttgggt gaggaagatt cgttttgctc 2940 ctggtaaagg aaatcaaaaa ttaatagcaa tgtacaatga tggagctgaa gtgtgggata 3000 ctaaagagag cctgtgtggt gcccctatct ccttgttcca agggcctctc ttgccttgaa 3060 agccttctta ttacaccagc cttggaatgg acagtattct ttggacattt ctcatgttga 3120 ctatccagaa aatgaagaaa taaagaatct cctccaagaa cagttgaatt cattgtctaa 3180 tgacataaag aaactgttgc ttgatccaga attcactctc ttgcagaggt gcctgcttgt 3240 ttcaaggctc tatggtgatg aatcggagct gcacttctgg actgtcgctg cccactacct 3300 gcacagetta teccaggaaa agteageeag cacaacaget ectaaagaag etgeteeteg 3360 agacaaactg agcaacccac tggatatatg ctatgacgtg ctctgtgaaa atgcctactt 3420 tcagaaattt cagctagaaa gggttaatct gcaggaagtg aaacggtcaa cttatgatca 3480 tacaaggaaa tgtacagacc agctactgct cttgggtcaa acagagctgt gcagttgctg 3540 ttggaaacaa gtgcagataa ccagcattat tactgtgatt cactgaaagc ctgtttagtc 3600 actactgtca cctcgtcagg cccctctcag agcaccatta agttggtggc aacgaatatg 3660 attgccaatg gcaaattggc agagggcgtt cagttgctct gcctgataga taaggctgca 3720 gacgcctgcc gctacctgca gacatacggc gagtggaatc gggctgcatg gctggcaaaa 3780 gtccgtttga atcctgagga gtgtgccgat gttttaaggc ggtgggttga ccacctttgt 3840 tctccacaag tcaatcagaa atcaaaggct ctcctggttc tcctctctc gggctgcttt 3900 tttagcgtgg cagagacgct tcacagcatg agatactttg atagagcagc cttatttgtg 3960 gaagettgee teaagtatgg ageatttgaa gteactgagg acacagagaa acteateact 4020 gctatatatg cagattatgc ccggagttcg aagaacctcg gttttaagca gggagcagtt 4080 ctctttgctt caaaagccgg agcagctggc aaagacttat tgaatgagct tgagtcccc 4140 aaggaagaac ccattgaaga gtgacagctt aataaatgcc agggaatctg acctggaagg 4200 cagatgggag ggggctggtc tggctgtggc caccgtcaca gtccaggatg aagaggagta

cagggtcctg	tgagctgttt	gaccactgtt	ctaagactat	gtgtgcccaa	aagcacataa	4260
gcatctatgt	tgagagtaag	tttgtatcct	gcgttggtct	cagaaagaac	gtgaatgctt	4320
aagattttga	aagtacataa	tattttatac	tttgggagag	agctttaaga	gtccctggaa	4380
atactttta	attttttaa	cttaaaattc	aagagactga	atcacttttc	tcattgatta	4440
aatgtaaaga	ttattgagaa	acctatagta	aatgaaattt	gtgagatgtt	ttctcaaata	4500
tatgctgtgc	ctgtacttat	atacagtctt	tcaagagaga	tacaaacaag	gcagaaacat	4560
ttaaactagt	attaaaggta	gtttaccaaa	gcatttttg	ttttcttacc	ttgaaaacac	4620
agaaccgtta	attccttggt	ttaagcagtt	gctaagtttt	gtaattttag	gctcagagga	4680
ccataggagg	ttttaagatt	tatgtttagt	ccgataggtg	aggtctttgå	tattttgaat	4740
tttaactcct	tttatgatac	atcacagtaa	cctcattttt	gaagtctttc	tttgtacttt	4800
aatgttctct	ctgttctaat	agttgaagta	tgagatgtaa	ctattataaa	ctgttgctga	4860
aaacataaat	gtctgtaact	tacaaacatg	ataaataaat	taaaaattcc		4910

<210> 131

<211> 3692

<212> DNA

<213> Homo sapiens

caatggtagg	ttctctgaac	tctttctgcc	tttcttagaa	agaaatcaga	aaaagttgaa	60
aatgaaaaaa	aatttatgag	acatcatcaa	gctataatca	aatcaccatt	tttgtgttat	120
catatggggt	ttcttgatta	ttttccatgg	tgaatgtcac	ttgtgccttc	tttccccact	180
agtgtgtgct	tgctgctgat	gaagtagtat	ttaatcagaa	ggaactggag	gttaaggaac	240
tgaagaatca	agtgcagatg	atggtacagg	aaaacaaagg	gcatgctgta	tctttgaaag	300
aagcgcaaaa	agtgaataga	ctgcaggatc	tcattctgtt	gctcaggctg	gtgtgcgctg	360
gcacaatcac	agctcactgc	agtctcgacc	ttccaggctc	aagtgatcct	cccgcctcag.	420
cctcctaact	gtgaccacag	gtgcatgcca	ccgcgcccgg	ctaattttct	gattttttg	480
tggagacggg	gtctcactgt	gttgctcaag	ctggtctcga	actcctgggc	tcagtgatcc	540

600 taccacctca gcttcccaaa gtgctgagat tgattacaga atgaaaaaat aatagaacaa 660 caacttcttg tggatcaact gagtgaagaa ctaacaaaac ttaacctgtc agtgacttct 720 tcagctaaag aaaattgtgg agacgggcca gatgccagga tccctgaaaa gagaccatat 780 actgtaccat ttgatactca tttggggcat tatatttata tcccatcaag acaagattcc 840 aggagggga atcacttgca aggtccacac aagtccgcct atgtactctc tggatcgaat 900 atttgctgga tttcgaacac aaagtcagat gctgttggat cacgtagaag aacgagatga 960 ggtcctccac tgccaatttt ctgataacag tgatgatgaa gaatcagaag gccaagagaa 1020 atctggaact agatgtagaa gtcgttcatg gattcagaag ccagactctg ttcccttgtt 1080 gaattgagtg atactcagga tgaaacacaa aagtcagatt cggagaatga agatttaaag 1140 attgattgtc tccaggagag tcaagaattg aatttgcaaa aattaaagaa ttcagaacgc 1200 atacttactg aagccaaaca aaaaatgaga gaacttacag ttaacatcaa gatgaaggaa 1260 gatctgatta aagaattaat aaaaacaggt aatagtatct tgtgaaccag cttatatgag 1320 aaagaaaact tctaaaattg cttctgatgt ggtaacagtt actttagttt ttgaagctca 1380 ggtctatcca cttagcttgg attggtgtaa caaggtgagt ttttaggcca atatgtggag gttagttatc agaagaattt ttttcttttg ggatttcacc tctgaattgt tctaaccggt 1440 1500 1560 catgttgtta ttggcactgt atattttttt actggttcat aaaatattgg tgtattgaac aattaatgaa tagtccaaaa tgatttgtta aaatatagta gttgtatgta ttctaaagtt 1620 agtcaagtaa tcataaatta gagtcagagg acagttcaca ctacatttag ttaaataact 1680 1740 tttatcaaaa aatgatgagt atttttggat agcagtataa ccagctatat aaatagtata 1800 ataggetggg egeggtgget eaegeetgta ateceageae tttgggagge eaaggeagge 1860 ggatcatttg aggtcaggag ttcgagacca gcctggccaa catggtgaaa ccctgtctct actaaaaata caaaaattag ctgggcatgg tggcgtgtgc ctgtaatccc agctactcag 1920 1980 gaggctgtgg caggagaatt gctggaaccc aggaggcgga ggtggcagtg agcttacgtt 2040 gtaccactgc actctagcct gggtgacaga gcgagactct gtctaaataa ataaatagta 2100 taataaactg tetetggtga ttatteacce cetgageett agaeteetgt tttetaetge 2160 cacgagtttg ccagtctagt tcagggacgg ttgcctattc agagcaaatc aaaaccaagc 2220 ttttagggtc actagctgga cttagaatca aaagagatac agaaatatct ttattctatt 2280 ttttctgttc tatatattaa taagaaaaga atttaaaagg aattaatctt gaataagttc

2340 aggttagtga aaaaggagag agttagcttt ggatgaaaag attcttaaga gacataacaa 2400 atcaaatgta ttgtggacct tgtttagatc ctgatttaaa taaaccaatt gtgagacaca 2460 ttttgaggca gttggggacg tctgaatatg gactgattgg tgttaatatt gttagtgtga taatgacttt ttggttatgt ccatattttg tgtgaatgcc gattgcagta tgtataagta 2520 2580 aaaagaggaa tttaacaaaa tgaagtatgt ataggtgaga tgagtgacat ctgggattgc 2640 tttacaatat ttaagcaaag taaaaagaca tatttgaagc agctgtgaca aaatcttgat 2700 aacttttaaa tetgggtgat gggggtteat tttattattt ettttgttat atttaaaaat tttcataata atttgaaaaa ggaattcaag cagacagatt attggtagca ggaggctgga 2760 2820 gtatactaag caagaggaca gtcactccaa atatccttct taactgagtt tgatgccagc 2880 aaagctcaac tacaaattca gaggaccaga aatgtcactg taaaatgcca aagattgaac 2940 cagtgagact gactggcagc agatgggaac agtcattaag gaactaatta ttaagaggcc 3000 tgatggcaag ctgtgtttga tgggggtggg tggggacaac tgggttttta atgctatgcc 3060 taacttcttt ttacataatt tatactaata gtaattatta ttacggttaa ggtaacgatg 3120 3180 ccaagtctgt aagcaagcag tatactttga aagtaacaaa gctagagcat gatgcagaac aggcaaaagt cgaactaact gaaacacaaa agcagctaca ggagctggaa aacaaagatc 3240 3300 tttctgatgt tgcaatgaag gtaaaattac agaaagagtt tcgtaaaaag gtggatgctg 3360 caaagctgag agttcaggtc ttacagaaga agcaacaaga tagtaagaaa ctggcatcac 3420 tgtcaatcca aaatgagaaa cgtgctaatg aactagagca gagtgtagat cacatgaaat atcaaaagat acagctacaa agaaaactac aagaagaaaa tgaaaaaagg aagcaactgg 3480 3540 atgcagtaat taagcgggac cagcaaaaaa tcaaagtaat attgtcatac attcctgcta agtataatat gaaatgttaa acggctcaga gctaacgaat ccatggtctt cattcagttg 3600 3660 gcttgtgaag tatctatcct tgacttgccc ttcactgctg tccttattca ctttaaagct 3692 ttgttcatct acatagtaaa acctatttat tg

<210> 132

<211> 3506

<212> DNA

<213> Homo sapiens

ttctcatact	ctgcaaagtg	agcgttgtta	gcctcgtttt	ccagatgaga	aagctgagcc	60
tcaaagaggt	tcagtaacct	gccccaggtc	acacagctga	gccgtgttca	agcccatgcc	120
tgtgtgggct	tcaaaagcac	aagggaactg	ccaacccagc	tgaaaccctg	atcctccatg	180
agctcctagg	gttagggctc	aggtgggaga	tggctgttct	tgggggcttt	gggaatgtgg	240
acaaggcccc	tcaaaggagg	ggctgttaag	gaagcctaag	gagaggtact	ccaggcaaag	300
agaacagcct	gcaaagccca	ctggccaggt	gagtttgggg	cagagcagag	ttcactgtta	360
tggcccaggc	tgcatggcag	gagtgagggg	gaaggggtgt	gggaaatgaa	actggtgagc	420
agtgaggatc	caaaggaggg	gagaggctgg	aggcagggag	tcctgggctt	ggtgacaaag	480
agagtgaggg	gggtggttcc	tggatctgac	tgcctgtgca	cagctttggc	actagttagg	540
attcccagga	aaccagctcc	tgctagtctt	gggagggggt	aatcaaccct	tctggaatag	600
ggggtcgggt	ccctggggca	agggcttatg	gggtcactgg	gctagaggac	actggtgtga	660
ccgaggctat	agagtttaag	gtattgaggc	gactggggag	aaaggagttt	tagtcccttg	720
ggtgggagta	ctgggacgac	tgaggggccc	tgaggggatg	tggtttggtt	tgaggtgagt	780
ggggtcaggg	tcttggagtg	aaccgggaat	ggaagtatcc	gggcctgggt	gtggggtgat	840
acggctgtca	ggggcctgga	gtcctagttt	ggagctttct	ggggtcttga	tattggggtt	900
atctaaaaga	gagaaatagg	acatcctgga	gttggagtat	gggcgtacag	gaacctgagg	960
tcatggtgtg	actggggtgt	tgaggtctgc	cctggggata	tggcagaagg	tgagcgctcc	1020
ctgctctgcc	gcttgacctg	gccatgcccg	cagagactga	tgagtgccga	ctgaaccaga	1080
acatctgtgg	ccacggagag	tgcgtgccgg	gccccctga	ctactcctgc	tactgcaacc	1140
ccggctaccg	gtcacatccc	cagcaccgct	actgcgtgga	tgtgaacgag	tgcgaggcag	1200
agccctgtgg	cccggggagg	ggcatctgca	tgaacaccgg	cggctcctac	aattgccact	1260
gcaaccgcgg	ctaccgcctg	cacgtgggcg	ccggggggcg	ctcgtgcgtg	gacctgaacg	1320
aatgcgccaa	gccccacctg	tgcggcgacg	gcggcttctg	catcaacttt	cccggtcact	1380
acaagtgcaa	ctgctacccc	ggctaccggc	tcaaagcctc	ccggcctcct	gtgtgcgaag	1440
acatcgacga	gtgccgggac	ccaagctctt	gcccggatgg	caaatgcgag	aacaagcccg	1500
ggagcttcaa	gtgcatcgcc	tgtcagcctg	gctaccgcag	ccaggggggc	ggggcctgtc	1560

1620 gcgacgtgaa cgagtgcgcc gagggcagcc cctgctcgcc tggctggtgc gagaacctcc 1680 egggeteett eegetgeace tgtgeeeagg getaegegee egegeeegae ggeegeagtt 1740 gcttggatgt ggacgagtgt gaggctgggg acgtgtgtga caatggcatc tgcagcaaca 1800 cgccaggatc tttccagtgt cagtgcctct ctggctacca tctgtccagg gaccggagcc 1860 actgcgagga cattgatgag tgtgacttcc ctgcagcctg cattgggggt gactgcatca 1920 ataccaatgg ctcctacaga tgtctttgcc cccaggggca tcggctggtg ggtggcagga 1980 aatgccaaga catagatgag tgcagccagg acccgagcct gtgccttccc catggggcct 2040 gcaagaacct tcagggctcc tatgtgtgtg tctgcgatga gggcttcact cccacccagg 2100 accagcacgg ttgtgaggag gtggagcagc cccaccacaa gaaggagtgc tacctgaact 2160 tcgatgacac agtgttctgc gacagcgtat tggccaccaa cgtgacccag caggagtgct 2220 gctgctctct gggggccggc tggggcgacc actgcgaaat ctacccctgc ccagtctaca 2280 gctcagccga gttccacagc ctctgcccag acggaaaggg ctacacccag gacaacatca 2340 tegteaacta eggeateeca geceaeegtg acategaega gtgeatgttg ttegggtegg agatttgcaa ggagggcaag tgcgtgaaca cgcagcctgg ctacgagtgc tactgcaagc 2400 2460 agggetteta etacgaeggg aacetgetgg aatgegtgga egtggaegag tgeetggaeg 2520 agtccaactg ccggaacgga gtgtgtgaga acacgcgcgg cggctaccgc tgtgcctgca 2580 cgcccctgc cgagtacagt cccgcgcagc gccagtgcct gagcccggaa gagatggacg 2640 tggacgagtg ccaggacccg gcagcctgcc gccctggccg ctgcgtcaac ctgccgggct 2700 cctaccgctg cgagtgtcgc ccgccctggg tgcccgggcc ctccggccgc gattgccagc 2760 teccegagag eeeggeegag egtgeeeegg ageggegega egtgtgetgg ageeagegeg 2820 gagaggacgg catgtgcgct ggcccctgg ccgggcctgc cctcaccttc gacgactgct 2880 gctgccgcca gggccgcgc tggggcgccc aatgccgacc gtgcccgccg cgcggcgcg 2940 ggtcccattg cccgacatcg cagagcgaga gcaattcctt ctgggacaca agccccctgc 3000 tgttggggaa gcccccaaga gatgaggaca gttcagagga ggattcagac gagtgtcgct 3060 gcgtgagtgg ccgctgcgtg ccgcggccgg gcggcgccgt gtgcgagtgt cccggcggct 3120 tecagetega egeeteege geeegetgeg tggatatega egagtgeega gagetgaace 3180 agegeggget getgtgeaag agegageget gegtgaacae eageggetee tteegetgeg 3240 tetgeaaage eggettegeg egeageegee egeaegggge etgegtteee eagegeegee 3300 gctgacgccg ccgacgccgc cctcggccca gacctcggtg atcactgagg gatttccgcg

ageteggeet caettetgee eegacttgtg geteggaeee agggaeette agggeeegea 3360 gaeeeteeeg gegeettgag accegaggeg eeeetaeegg eeeeeteee eggttagegg 3420 geggttgtaa ggteteegge gggegetgee tgeetteete eeagagggtg ttteetagaa 3480 actgataaat eagategtge etettt 3506

<210> 133

<211> 4659

<212> DNA

<213> Homo sapiens

actttcctgg	gaagttttcc	tctcgctgcg	gaacccccgg	ggccctgact	ggccgcttcc	60
tccccgctgg	ccgtagggag	ttttctgtcc	gacaccccct	cttcctggcc	gggcagcctg	120
gcttcggcag	accccgggc	catgtttcca	cacttgggca	ctggcatctc	tgagcatctc	180
agtctcacct	cctgaggaca	gcaagtgatc	ctggctaccc	cgggtaacca	ggcctcaggt	240
gcaggcccca	catgacagat	ggacagactg	aagtgggagg	tgggaggcgg	acaccccggc	300
gtcctgccag	gaagggacac	catctgcacc	tggcgagctg	tggcctccag	ccatcgtttc	360
cctgcctagt	taggggcttt	tccctccaga	gccctgtcca	ctctggcctt	gtttctggaa	420
ctgctcctca	cccggaggac	cccatccttt	ccgtgaagca	ggcagtgggg	gctttctggc	480
aagtggcctc	ttcattaact	atcccagagt	gagtgcagat	gaccagaggg	aagctggcca	540
agtgcaaagc	attgttattg	tggaattaaa	gagcccgctc	ctgctcgcct	ccagaagtgg	600
taatgtattt	acagatgaaa	aaatgagggc	ttccagactg	tgctgatgtg	agccccgcca	660
tccgttctgg	ttcagagcat	aatcgtctcg	tcttcagaaa	gaaggaagac	agaacatgcc	720
tgccaagccc	ttcctctctt	ctgttctgct	ctcctggaaa	gttctggact	tctctggccc	780
agggcctcag	gggactggcc	agccctgctc	ctgtgggcac	tgggcagagg	gacaaggcgg	840
accacctgag	cctgctggag	ggccggtatc	ccagggcagt	agtgattagg	gaatgtcact	900
ctggccacat	cccagcctgg	gcgggcctct	atggggaggt	ccccgtttga	tttggtttgg	960
ttgtccacag	tcagagccaa	gctctgggca	tggagtctgg	gatggcaccc	tgaccccttg	1020

1080 ccttacagga ctttgggcag ccttctttgg cactgtgcct catctgtaac aagagaggaa 1140 cagcgggctg ggtaggactt ggacagatag gcactgtcgt ggggacctgc agcctggcca 1200 caccatcacg ggctctgagt catctcctac cctctccctt gtagtcacag cccaggagaa 1260 ttctgctggg ggtgggcaga ggtctttgcc atctgccccc tacgtggctg gctggcagat 1320 caccgtggct ctctctcctg ggaccttggg cagtgtgtga ggtggtgggg ccaagaggag 1380 aattcatttt tggaacagtc ttgaagtgtt cggaaaattg ctttcatgtg ctgaggaggc 1440 cctgcggagg cttccagact gagctgcctg ctcaagccct gcccttggaa cccagagtgg 1500 cgactgctca gggacacgtc tgggttttaa gcacacccat ccatttgggc agtcttttcc 1560 tagatgggct gacgcagcag gcactttggc ccacagaaat tataagatgc ttcagaaggg 1620 gatgggaggg gaagcaggaa cgtgctggcc aaagcgctct atgacaattt ggccgagtcc 1680 ccggatgagc tctccttccg caagggtgac atcatgacgg tgctggagca ggacacgcag 1740 ggcctggacg gctggtggct ctgctcgctg catgggcgcc agggcatcgt gcctgggaac 1800 cgcctcaaga tcttggtggg catgtatgat aagaagccag cagggcctgg ctccggccct 1860 cccgccaccc cggcccagcc tcagcctggc ctccatgccc cagcgcctcc ggcctcccag 1920 tacacgccca tgctccccaa cacctaccag ccccagccag acagcgtcta cctggtgccc 1980 acteccagea aggeteagea aggeetetae caagteeegg gteecageee teagtteeag tetececcag ecaageagae atecacette tegaageaga eaceceatea ecegttteee 2040 2100 agcccggcca cagacctgta ccaggtgccc ccagggcctg gaggccctgc ccaggatatt 2160 taccaggtgc caccttctgc cgggatgggg catgacatct accaggtccc cccgtccatg 2220 gacacacgca gctgggaggg cacgaagccc ccggcaaagg tggtggtgcc cacccgcgtg 2280 gggcagggct atgtatacga ggccgcccag ccggagcagg acgagtacga catcccgcga 2340 cacctgctgg ccccggggcc acaggacatc tatgatgtgc ccccggttcg ggggctgctt 2400 cccagccagt atggccagga ggtgtatgac acaccccca tggctgtcaa gggtcccaat 2460 ggccgagacc cgttgctgga ggtgtatgac gtgcccccca gtgtggagaa gggcctgcca ccgtccaacc accacgcagt ctacgacgtt cctccatcgg tgagcaagga tgtgcccgat 2520 2580 ggcccactgc tgcgtgagga gacctacgat gtgccccccg ccttcgccaa ggccaagccc 2640 tttgacccgg cccgcacccc actggtactg gctgcgcccc ctccagactc cccgccggcc 2700 gaggacgtgt atgacgtgcc gccccggct cctgacctct acgacgtgcc ccctggcttg 2760 cggcggcctg gcccgggcac cctgtacgat gtgccccgtg aacgggtgct tcctcctgag

2820 gtggctgatg gtggcgtggt cgacagtggt gtgtatgcgg tgcctccccc agctgaacgt 2880 gaageeccag cagagggeaa gegeetgteg geetecagea eeggeageae aegeageage 2940 3000 gctgtggagg ccctggcacg gctgcagcag ggtgtgagcg ccaccgttgc ccaccttctg 3060 gacctggcag gcagcgcgg tgcgactggg agctggcgta gcccctctga gccacaggag 3120 ccgctggtgc aggacctgca ggctgctgtg gccgccgtcc agagtgccgt ccacgagctg 3180 ttggagtttg cccgcagcgc ggtgggcaat gctgcccaca catctgaccg tgccctgcat 3240 gccaagetta gccggcaget gcagaagatg gaggacgtgc accagacget ggtggcacat 3300 ggtcaggccc tcgacgctgg ccggggaggc tctggagcca cccttgagga cctggaccgg 3360 ctggtggcct gctcgcgggc tgtgcccgag gacgccaagc agctggcctc cttcctgcac 3420 ggcaatgcct cactgctctt cagacggacc aaggccactg ccccggggcc tgaggggggt 3480 ggcaccetge acceeaacce caetgacaag accageagea tecagteaeg acceetgeee 3540 teaccecta agtteacete ecaggaeteg ecagatgge agtaegagaa eagegaggg 3600 ggctggatgg aggactatga ctacgtccac ctacagggga aggaggagtt tgagaagacc 3660 cagaaggagc tgctggaaaa gggcagcatc acgcggcagg gcaagagcca gctggagttg 3720 cagcagctga agcagtttga acgactggaa caggaggtgt cacggcccat agaccacgac 3780 ctggccaact ggacgccagc ccaacccctg gcccggggc gaacaggcgg cctggggccc 3840 teggacegge agetgetget ettetacetg gageagtgtg aggecaacet gaceacactg 3900 accaacgccg tggacgcctt ctttaccgcc gtggccacca accagccgcc caagatcttt 3960 gtggcgcaca gcaagttcgt catcctcagc gcccacaagc tggtgttcat cggggacaca 4020 ctgtcacggc aggccaaggc tgctgacgtg cgcagccagg tgacccacta cagcaacctg 4080 ctgtgcgacc tcctgcgcgg catcgtggcc accaccaagg ccgctgcctt gcagtaccca tcgccttccg cggcccagga catggtggag agggtcaagg agctgggcca cagcacccag 4140 4200 cagttccgcc gcgtcctagg ccagctggca gccgcctgag ggtggtgacc ccaggaggga 4260 ggcaggggag gggtgcggcg gtcccagctc cctggctccc atgtcaagag tcgctgtgcc 4320 acaggettag ggacaggace ceagetetge gteggteetg gtgeeetgga tgeeeaggaa 4380 tctgtatata tttatggccg ggcagggtgt ggggccatgc ctcctcagga gccgaagccc 4440 aggggccggc cagtggcctt ccccagcatg caccacgggc ccgggttggg tcaccagacg 4500 gggctggagt gtgagggtcc tgcagcctgc aggacctcgt gccaccccga gggctgagcc

tggtcccacg agggtgccgt gtccctgac agggccagtg cagtttggtg tgtcctccgc 4560 ctttccagga gaagaacctg aagaactatt tttcgttatt ggttttccaa tcatttgact 4620 aagagtctcc atttaaataa agtttttaaa aggaagagc 4659

<210> 134

<211> 3722

<212> DNA

<213> Homo sapiens

<400> 134

60 aaatacagta atgaaaactc attgaatggg tttaataaca gattgaacag agcacagccc 120 agaattggtg aactagaaaa atatacagac agaaccacag agaaaataag ggagtgtggg 180 gattgataag agcataagaa acgtgatgga aaaactccaa agatctaaca tacatataat 240 tagggtctgg gagatagaga agtaacagaa tcgggcagaa gtgatatttg aagaaatggg 300 ctagaatgtt ccaaaatgga tgaaaggtag cctacagatt ctagaagctc agcagacccc 360 aagcagaata ggtacaatga aaagcacatc taggaaaatt aaaagcttaa gagccaggag 420 gaaaaatatt atctctgtat cagttaccta ttgttacaaa caaacaaatg gctgtttact attacagaac ttaacagcca cttatttgtt tgtaattctg ctgtctgggc tgggctcagc 480 540 egggeactic tietgetgat etcacatgaa gieactiatg tigetgggge taeaeaeeea 600 agagetettg acteteatgt ttggtgeete tgggggaatee tgggaagagtg ggagetgtee 660 aggetecate tetacatggt etettaagta ceatgtgate cetecaagte catetggtet 720 ctccagctcc ccatggtctc tctggcacag taataagcac gtgatgggtc agggcttcag 780 aagggtgaaa aacagaatct gcctggcttc tcaaagccta gaaactcata gagcatcatt 840 tcaactgcat tcttgttggt cagagccagt catcacaaag ccagctgaga ttcaaggaaa 900 cagatagaac ttcacttctt gataagacat gggtgaagag gagggcagat agaattttag 960 ggcatctctc atttgcctga gtcttcctac tggctcacat tgcttaaatt cctccgacat 1020 gcaaaatgac acccaccca agaaccccac agtcccatcc aattatggca tcaggctcag 1080 agtctacttg tgtacagtag ttcccctca actgtggttt cgctttccac agttttcagt

1140 tacccacagt caactgaggt tcaaaaatag atgagtacag tattaataag acattttgag 1200 gtagagaaag atgcagacca catccacaca acttctatta cagtgtatta ttttaattgt 1260 tctgttttat tattattaat ctcttactgt gtctaattta taaattaaac tttatcatgg 1320 gtatgtatat aggaaaaaat aatagtttgt ataaggttcg aatagtttgt ataaggttcg 1380 gtactatcca cagtttcagg catacaccgg gggtcttgga acatattccc ctcagataag 1440 agagaattcc tgtgtatgga agagactcct cagatacagc ttctcttcaa ctgtaaacct 1500 atgaattaaa aaaaagttat tggtcctatc caccccgca catacaacct acattgttat ggcaaggata cgatgtcaca tgaattgact aagtttacaa gagaggaaat tgaaggcatg 1560 1620 tagcaatccc atggcagttg tgaaatccat ctgcctatat gtcaccaatt cccccaattc 1680 caggggtagg gaacatttga ttagtctact ttggttctct gaagttggct cccttttctt 1740 tttctcagtt cttgactttt ttctttgagc tgtctttcct tttccatgag aaatgtcctc 1800 tttttgtage ttteteagee tgettetagg etetgteeca aetggeaeag ttateeaeae 1860 tggcacaact tctttaaaaa gctttgtgga ctttcaaatt ataaaccact cactccacca 1920 gagagaagcc acacccacaa atttcttcaa gaagtcctct atgtactttg aatgtcaatc 1980 agggaatgat accetttaga gteatatatg tettttgtet acctgagage gteagetaga cactggctta aatctttctg aagtacaggt ggtcgtccac ttatgatggt tcaacttaga 2040 2100 attettttae tttaggatgg tatgaaaget atatgeatte agtageaace ataetteaag 2160 2220 tcagcacttc attataaaat aggctttgtg ttagattact ttgttcaata taacataatg 2280 caagtgttct gagcacattt aagcaatgac aggttgggct gtgatgtatg gtaggttacg 2340 tgtactattc aacttaatat tttcagctta cgatgggttt atcaggacat aaccccattg 2400 taagtcaggg agcatctgta gtagtaacaa ggttgtattg catgtgcttt attttatctt 2460 gatcctcaga ccataatctt acagttaaca ccctggattt ttttttttt aacttcagaa 2520 ccttttgctg aagaagctgg taacgagaaa gttttatttt gtaaccctgc aagtcccagg 2580 ttgaaagtaa tttcctctaa attctgcttg aaactgagca gttccttgtt tagttcttct ctcttttaat acctttctac aggtgttttt tgaaaaattg cttatcactt tcagcatttt 2640 2700 tcctggaaac cttagccaga tctataactt caataggtac tttttctatc ttccaagata 2760 ctgtctcact tgttttgtca gtagattaca tggcttctgt ccagcctgaa ataccaattt 2820 cctcagtggt tttccagcct ccgttagtag tctctttgcc gctcttccac caaatgtcta

taacccagtc	cccaaactag	tgctacatgt	cttaagtttc	tgtcatggca	atgccctgtt	2880
taaataccaa	atactatttc	agttatcttt	ttctgcctaa	caaatcaccc	caaaatttac	2940
taccttaaaa	caaaactatt	ctttgcttaa	gattctactg	tctgaactgg	actcagctgg	3000
gcatttcttc	tggtctcacc	tggagtcatt	tatgcaactg	cagacatgtg	gggactccac	3060
caaagatggc	tttactcaaa	tgtctggggc	ctcaactggg	gtggctgcat	tagctctggc	3120
acagctgcag	ttccctctcc	agcagggtcc	tgggccattt	cacatgatga	ctgagggctc	3180
caagagggtg	aaagcagaag	catctgggct	aggcctctta	gagcctgtgc	ataaaactga	3240
aacagcacta	cttcatccat	gctgcctttc	aaagcaagtc	ccggggcctg	ctcaaaatta	3300
caggcaggga	aaatatcctc	tacctgatgg	tagtgacaaa	gaatatgtgt	cccatcgtta	3360
attcaccagt	tgccttcaca	gttgcaacaa	tgagactgtt	agcttttaaa	cagaaatgat	3420
aaaaactaga	agccggccgg	gcgcggtggc	tcacgcctgt	aatcccagca	ctttgggagg	3480
ccgaggcggg	tggatcagga	ggtcaggaga	ttgagaccgt	cctggctaac	aaggtgaaac	3540
cccgtctcta	ctaaaaatac	aaaaaattag	ccgggcgcag	tggcgggcgc	ctgtagtccc	3600
ggctactcgg	gaggctgagg	caggagaatg	gcgtgaaccc	gggaagcgga	gcttgcagtg	3660
agccgagatt	gcgccactgc	agtccgcagt	ccggcctggg	cgacagagcg	aaactccgtc	3720
tc						3722

<210> 135

<211> 3938

<212> DNA

<213> Homo sapiens

atgtgggtat cacgttcata cacgggtgtg tggaggtgcg ggtgtgtgca c	cactcagttt	60
cttttttga taacctggtt ttgtagccag ccatacaaca tggatccttt t	agtatttca l	20
tcatagggat gttacacaag ggagcatgtg gcagatgtcc taggattgca g	gctttgcccc 1	80
ctcattgtgc ccatggtggc tttgcggggt ccgcagcggg cctgctctgg g	gtgctctgtg 2	240
ctttgcccca ccctgctgcc ctactagagg ttggccagca ccataattgt t	catctcttg 3	300

360 tecteattte tattetttt tttgagacag agttteaete ttgttgeeea ggetggagtg 420 caatggtgcg atctcagctc actgcaacct tgcctcccag gttcaagtga ttctcctgcc 480 teagectect gagtagetgg gattacagge atgegecace acgeetgget aacattgtag 540 ttttagtaga gacgggattt ctccatgttg ttcagactgg tctcgaactt ccgacctcag 600 atgattegee caceteggee teceaaagtg etgggattae aggeatgage caceaegeet 660 ggccatctca tttctattct tcctccaaat attttctggt acatgggtgt ctgaccttga 720 cccttaggac cagttgatag tcctggaatc cacttccaga aggccttggg gctctgtttg 780 cccctaatgc agaagcttct ggtagaggca gctttgaggc ctgggctgcc tgggagaggt 840 tggtgggccc cctgcacacc tgatcctgag tggcgtttgc accgtctttc ctgcgatttg 900 cctctgctca cacgtgtagg gacgggtctc tccttgaggc agctgctctg tgctggaaca 960 ctgctcaggt cggagagttc tcgtactgag ccgagatggg catctgtgat gtcctgccct 1020 gttggagagg tctgttgtcc ccctctaagt gatgacacca tccacatgtg gactttgcca 1080 cgtttggatg taagegeete tgeagegeeg acetteegea tggettette acaeteeete 1140 tcctggccat gctgggtact ggggacccca cagggagtgc accctcagga cgctgggttt 1200 ggttccagct ccgactggaa ctgattatgt gatcgtccct ggcctgagcg taagacccac 1260 ttaacaagac ctcaggggtt ttagtctcag ctccttccct ggcccaatct ggctcttagc 1320 cagececect ectectetge caetgteeca gecactgace atgecetggg tgeceaecet gtgcagggtg gaagcctggc tttgggctct tggagttcct gggcagggaa ggctcccact 1380 ttctgccctg tgaagcccac ctcagtcctg gctgccccat ttcccaaggg gctctcaggt 1440 1500 gcagtggctt ctgcagcccc tctcttggga tgcaggcctg ggcacgtgca gccttgtcta 1560 getetgeece agtttgeeca tecagecete aagttettee tgeecettea ggeeactget 1620 tgagctgatg gcagagatgg attecteect eccegteetg tetggeatee teeetttggg 1680 accetgggtt cattecetgt tetggecace ttgtttgtgg eccetetagg ecageaggae 1740 agacacaccc agcgtgcgcc tggcctcagc acctcacacg cagcgtgcat gtgtgtgcat ctgtgcttgg cgtcggcgtc acgtcttaca aggacaagca ggcactgggg aagggtgggg 1800 1860 acacaaagga ggaacgggat gggggctccg aggcctggga gccgccctgg gaggcctctg 1920 ccctggggac cgttcagcag ctttgggcct ctctccagat catcagccat gacacccggc 1980 getteegete tgeeetgeeg teaceeeage acateetggg cetecetgte ggtgagteae 2040 gcccctgctg ggcccattcg gagcccggca ggctgctggg gcactagatc agagagatgg

2100 aagetttaca tttecaccag ggagageagg gaageettea ggaggaggtg acagetgeee 2160 tgggcctttg agggcgagtc tgttggaatg agagtgggaa ggcccagagt ccctggcagt 2220 ggcaccagca ggagtgaagg catggaggca ggaagctggg acgtgagggg aatccccggg 2280 2340 gcaggggagt gggttgacaa gacccagggg tcacccgcag gatgatctct ggcccagagt 2400 gaccccgttc tgtcctgcag gccagcacat ctacctctcg gctcgaattg atggaaacct 2460 ggtcgtccgg ccctatacac ccatctccag cgatgatgac aagggcttcg tggacctggt 2520 catcaaggtt tacttcaagg acacccatcc caagtttccc gctggaggga agatgtctca 2580 gtacctggag agcatgcaga ttggagacac cattgagttc cggggcccca gtgggctgct 2640 ggtctaccag ggcaaaggga agttcgccat ccgacctgac aaaaagtcca accctatcat 2700 caggacagtg aagtctgtgg gcatgatcgc gggagggaca ggcatcaccc cgatgctgca 2760 ggtgatccgc gccatcatga aggaccctga tgaccacact gtgtgccacc tgctctttgc 2820 caaccagacc gagaaggaca tcctgctgcg acctgagctg gaggaactca ggaacaaaca 2880 ttctgcacgc ttcaagctct ggtacacgct ggacagagcc cctgaagcct gggactacgg 2940 ccagggcttc gtgaatgagg agatgatccg ggaccacctt ccaccccag aggaggagcc 3000 gctggtgctg atgtgtggcc ccccacccat gatccagtac gcctgccttc ccaacctgga 3060 ccacgtgggc caccccacgg agcgctgctt cgtcttctga gggccgggca cggtcacacg 3120 gccaccegcc cegegeaccc caegecetgt teaegeteac ceagteacct ecceacateg 3180 cacactgggg ccccgggttc agcctggcct gcccgtgccc tggtgaatca cctggctgag 3240 cagttcccct ggagcccctt cgggagcagg gctgtgtccc agatgggcca cggctgagcc 3300 ttcagagtac gtcctgcctg gcacttactg gtccttacca gagacgccca gccccatccc 3360 tgtcctcatg acccctcgtc cacccccac acacactata aggctgaggg ctgccagcag 3420 ccccgtctgc ccaccattcc cggccgtgga ccatagtcgg gatgtcagca gacacacatg 3480 ggcagcccaa agctgcaggt gccagggccc accccagcct cgcctgtcac ccccactccc 3540 gcctcagggc caggcccagg cctcaccacc tgacgctgca tgagacattg acaccagaaa 3600 gccctcttgg gggcactgct ccctacccca gggccctggc cagccgggag cttggctctc 3660 ctctggctag agtgggaaga gggggctggc catggggccc tcccagaacc tcagcatttc 3720 cttccagccc atccaaacac tgaggcagcc ttgggggaacc ccgagctggg gggttggcag 3780

aactcccaca accacatgta tttattcctc tgtcctaaac cgtcccctcc ttccctcacc 3840 cccagcacag ggggattctg agcagtgcct cttgtctgag ggacatatca gtgacctcga 3900 cgttgccttt agactacagt tgtgttagcc tcttgcgt 3938

<210> 136

<211> 3633

<212> DNA

<213> Homo sapiens

atggatgtga	ggagccaggt	tggacctgtg	tgcattcatt	agatgggtgg	gaggctgagg	60
aattcacagg	acgctaacct	ggccctctgg	acatctgtgt	gtgctgctta	ggtgcatgca	120
ggagcggggg	caggggctgc	tggtgtggca	gcaggaggag	ccctctgagt	ttgacttggc	180
ctacgccaat	ttcctctccc	tggatatcag	catgctgcgg	ctctttgaga	ccttggagac	240
ggcaccacag	ctcacgctgg	tgctggccat	catgctgcag	agtggctggg	ctgagtacta	300
ccagtgtgag	tgaaggccaa	tggttggtcc	ccctgtcgtg	gcttgggagg	tctctctcaa	360
atgtcagaac	tgtttttatt	cttttataaa	ggctgcttag	aaaacaggat	aacaggcttt	420
agtcaggcag	atctggcttg	aaacctaaag	tcattctgca	gctgtttgcg	tttggacaaa	480
tgccttgacc	tctctgagta	tgtttgttct	catctgaaaa	atggacataa	atcctcctgc	540
ctcataaggt	tgatgaaagg	attaagtgag	gtgatgcaaa	gaaagcccat	ttcctggtac	600
ataagttcct	ggtacagagt	ctcactctgt	cgtcacccat	agtggagtac	agtggcctga	660
tcattgctca	ctgcagcctc	gacctcccag	gctcagttga	tcctcctgtc	tcagcctcct	720
gagtagctgg	gactacaggc	atgtgtcaac	catgctggct	aacttttctt	ttcttttcct	780
ttgtttggta	gagacgaggt	cccacgttgt	tacctaggct	ggtcttgaac	tcctgagctc	840
aagtaacctc	ctacctcagc	ctcctaaggt	gctgggatta	caggtgtcgg	ccactgtgcc	900
tggcccacaa	gtcttaattg	taacttttat	aattttgaag	ataataaagt	gtgtaaggtg	960
cctgatacag	agtaggtaac	ttttttgtta	agaaacaatt	taatacgttg	ggatgtgcac	1020
aggttgcgtg	aggccagagt	tggagaccat	cctgggtaac	agagtgagac	ctcgtctctt	1080

1140 caaattttta aaaaaagaaa caagaaacaa tatattgaat gccttcatcc agtcgggttt 1200 tcattgtgcc tctcttttct gcctgttact gtgctgggga cacagcagtg aacaagatga 1260 acccagecce tgegetgeea ggatgataga etaaaacaag tagetaetgt atageatgtt 1320 gagtgactgg aaaagggaga ggcaggtggc agaggctcac agggccccct aagcatgggt 1380 gaagtttata gtgaggagct ttgggagggt ttttgcccat aaagggaagg tgacttgcct 1440 gttttcacag actcagacag tggccaagct aaagagggcc cccacccaca tccaactcag 1500 ggtccaagcc ttcccctttg ccttcctcca ccgctgccat aaatgccaga gcctctcaag gaaccagtcc tcattctacc gtcacttgct gtgtgacccg gagagccttc ctgtggaaga 1560 1620 tggaggttgg actcaatctc caagggccct ttcatcttgt tagtctgagt ctatgtattg 1680 attgaaaaaa caataatagc agctgtcact gttagccagg tgccagctat tagccaggcc 1740 cggtgggaag cacttacagt catcattgct catgttcaca gcagccctat aggtttgtgc 1800 taggttgatc tccattttta aagaggtgca gaaaggtgag tgacttgctc tgggtcactg 1860 ggcactcact gggcacatgt ttttgtctgt tgagggtggg ggaggtctag aaccagggcc 1920 aagtgcagac agtctgcact gcatgtatgg cagggggtaa gggggcgaaa cagattttcc 1980 ctacttttta tttagcaaac ctctctttcg ctgctgttat gtgccaggta ctgggctgct 2040 gggggatccc aagtgagcag agtctgtttt ctaccctcga ggagctcaga gaaaaggaaa 2100 tagataatta ctgtgtgatg agactccaga cagaggggtt ggcatctgca catccttcct 2160 gggcatctcg tgggcactgc tcgattacca ccaggccttg cacacctgcc tcccctccaa 2220 gcccctcctg ggcctgggct cctctgtgat ctacgtcctg tggaacctgc tgctactgtg 2280 geocegagte ctagetgtgg ecetgttete agecetette eceagtatgt agecetgeat 2340 ttcctgggcc tgtggctggt actgctgctc tgggtttggc ttcaaggcac agacttcatg 2400 ctggacccca gttccgagta tcctctattt ctcctggttc aacgtggctg agggccacac 2460 ccgaggccgg gccaccatcc acttggcttt cctcctgagt gacagcattc tcctggtggc 2520 cacctgggtg acttacagct cctggctgcc cagcaggatt ccactgcagc tgtggctgcc 2580 tgtaggaggc ggatgettet ttetgggeet ggetetgtgg ettgtgtget aetgetgget gcaccctagc tgatgctggg agcccaaccc tgaccaggtg gacaggaccc agagtctact 2640 2700 ttcctcagag gggtatcagc tgcctcagac ccagttagca cagaactttt ttcccaaggg 2760 taaggetgag getgettege eagtgaaggg agaggtgaae ggegteettt gaageaggat 2820 cagacccagc cagcagagat ggagagtgac tgctggcaga aggcaggcga ggataagcta

acgatgctgc	tgtggcctcc	atgcactcag	caagagtggg	atgcctctgc	tgggccgtgc	2880
accagggatg	gtgctgagtg	gggcagaggc	ctgccttcaa	ggagttcaca	gtgaacaaga	2940
tgagaagggc	tgggccctgc	agggtcaaga	gccccaatta	cgtacaagac	actttgggag	3000
gaaagaagac	taccttttct	tttcccctg	ccattggtat	agctggtgcc	ccaaaacttt	3060
cacctccctc	cctggccacc	tctaaaatga	ttggtatagg	ggcttcccca	ccccttagct	3120
cccctatcct	gggctagaag	gccacaggga	ctgtcctcta	gaattcttcc	tccctcccc	3180
cacaccattc	attcaattcg	tgaaacaaat	cttcaccgag	agcagtttat	gtgctaggaa	3240
catcattcta	tccttgcaac	ctggaacaag	accagctacc	accttagctt	catcccctac	3300
ttgcaccaac	cagtcccagg	ttagatctca	aatgccggaa	gtcagggatg	cccaactctg	3360
ggcagcccca	gtcagaacct	ctgggatctc	agtgaagctg	gcctggcctc	tgctcttgct	3420
ctcaaggggc	tgcttttcaa	ccaagagcct	tgtgagcctg	gtctgagcct	tgcacagcca	3480
ctgagtattt	tttattcctt	agccagtgta	cctcctacct	cagagtctat	gtgagaggaa	3540
gagaatgtgt	gtccctgtgg	gtctctgcaa	gtgacagatg	tgttgttttt	aacagtatta	3600
ttaggttatg	attaaagcct	catgaaatcc	tct			3633

<210> 137

<211> 3667

<212> DNA

<213> Homo sapiens

gtgctgctag a	aaccacgaa	cattagtcat	ctcgcagcat	gtgtgcacat	ggggtgaccc	60
gggggcctcc t	cgaatgcag	cgtctacgcc	tggtgaatgg	acgcactctt	accaattctg	120
ctctgggaga t	gcagcggta	acctaccgag	cgcagaggcc	ggcgcgcacc	cgtggagccc	180
gcgctcgcga t	ccctcctcg	tgccagggcc	ccagggcagt	caaggcctgc	cgaccgttag	240
gcgggtcaag g	ggtacacag	ggtgcgaatt	cgttaggcaa	aagctgggta	caggcgcgag	300
ccacaggcac g	gaaacctcg	cgccgaccgg	ggccctaggc	ccgacgacgg	caggtaaggg	360
gaagtggagg c	acacagggc	tgggacgtgc	cccaggcacc	atccgggtgg	cttcgggcgc	420

480 gggacgtccg cagcccgca gctcccagga cgttcgacaa tctgcagctg accagcttcg 540 gccggtttgg ggataaaggg aagacaggcg gcgcggggag tgggaacgcc tgaaggccgc 600 gcccctcctt tcaggtcggc caggagcgcg ccggtaagag cctggggggca aggggtagaa 660 agacgeceae eteateacaa eccagagete gggaeteeta tacagteeca tagagaacag 720 geggeegeea tteeceteee eeacgetgge gggtaagget agagaaeggt tteaaggaag 780 acgcatgcgc atgaaataat tataaaccgc taggactccg aagttcaata ttcgcgggaa 840 ggcgcaggcg caacaaaaag cccggcgggt ttatgggtgg gggtgctgag cccaaaaccc 900 aagcgtgtaa taatccgccg gcgggaggtg ggctggctct tgaaattacg catgcgccag 960 agctctttgt gacgcaacgg ggcggtgcgg gcagctggct gcgcgtgcgc agaactcgca 1020 caagggacct tatttaggtt gcgcaggcgc ccgctggcca tttcgtctta gccacgcaga 1080 agtcgcgtgt ctaggtgagt cgcggtgggt cctcgcttgc agttcagcga ccacggtggg 1140 taccgttttt gcgaggattg tttgtcccca tatctctggg agggccacgg ggaccttggc 1200 gagctgcagg ctgccgtcga gagccgcgag tggttcgctg aatctcggca ccgccgctga 1260 ggcctgcagg ccgcgccgac tctattgtgt gagaagtcgg aggaggcgga gcggaagcgg 1320 ccgccgccat ttcctttcct ctacgctggc tctcggcccg ggcccccacg gttcggggcg 1380 ccgacagctg ttgctcagga cagctttggg ggtccggtcg ccggacgagg aggtgttgga gtcgccgggg tgggtgcatc cgcccggttt ttgctccgtg ggggggcggt gcgggcccgg 1440 gcgcgcctcg gaggcgaagg acagcttaat tggcgctctc agttctggtc ctccccgctt 1500 tgcagtttgt ttcgacgccg gaccgcgtaa gagacgatga tgttgggcac ggaaggtgga 1560 1620 gagggattcg tggtgaaggt ccggggcttg ccctggtctt gctcggccga tgaagtgcag 1680 aggttttttt ctgactgcaa aattcaaaat ggggctcaag gtattcgttt catctacacc 1740 agagaaggca gaccaagtgg cgaggctttt gttgaacttg aatcagaaga tgaagtcaaa 1800 ttggccctga aaaaagacag agaaactatg ggacacagat atgttgaagt attcaagtca 1860 aacaacgttg aaatggattg ggtgttgaag catactggtc caaatagtcc tgacacggcc 1920 aatgatggct ttgtacggct tagaggactt ccctttggat gtagcaagga agaaattgtt 1980 cagttcttct cagggttgga aatcgtgcca aatgggataa cattgccggt ggacttccag 2040 gggaggagta cgggggaggc cttcgtgcag tttgcttcac aggaaatagc tgaaaaggct 2100 ctaaagaaac acaaggaaag aatagggcac aggtatattg aaatctttaa gagcagtaga 2160 gctgaagtta gaactcatta tgatccacca cgaaagctta tggccatgca gcggccaggt

2220 ccttatgaca gacctggggc tggtagaggg tataacagca ttggcagagg agctggcttt 2280 gagaggatga ggcgtggtgc ttatggtgga ggctatggag gctatgatga ttacaatggc 2340 tataatgatg gctatggatt tgggtcagat agatttggaa gagacctcaa ttactgtttt 2400 tcaggaatgt ctgatcacag atacggggat ggtggctcta ctttccagag cacaacagga 2460 cactgtgtac acatgcgggg attaccttac agagctactg agaatgacat ttataatttt 2520 ttttcaccgc tcaaccctgt gagagtacac attgaaattg gtcctgatgg cagagtaact 2580 ggtgaagcag atgtcgagtt cgcaactcat gaagatgctg tggcagctat gtcaaaagac 2640 aaagcaaata tgcaacacag atatgtagaa ctcttcttga attctacagc aggagcaagc 2700 ggtggtgctt acgaacacag atatgtagaa ctcttcttga attctacagc aggagcaagc 2760 ggtggtgctt atggtagcca aatgatggga ggcatgggct tgtcaaacca gtccagctac 2820 gggggcccag ccagccagca gctgagtggg ggttacggag gcggctacgg tggccagagc 2880 agcatgagtg gatacgacca agttttacag gaaaactcca gtgattttca atcaaacatt 2940 gcataggtaa ccaaggagca gtgaacagca gctactacag tagtggaagc cgtgcatcta 3000 tgggcgtgaa cggaatggga gggttgtcta gcatgtccag tatgagtggt ggatgggaa tgtaattgat cgatcctgat cactgactct tggtcaacct ttttttttt tttttttt 3060 3120 ttctttaaga aaacttcagt ttaacagttt ctgcaataca agcttgtgat ttatgcttac 3180 3240 tcatctagga tgtaacagtg aagctgagta aactataact gttaaactta agttccagct tttctcaagt tagttatagg atgtacttaa gcagtaagcg tatttaggta aaagcagttg 3300 3360 aattatgtta aatgttgccc tttgccacgt taaattgaac actgttttgg atgcatgttg 3420 aaagacatgc ttttattttt ttgtaaaaca atataggagc tgtgtctact attaaaagtg 3480 aaacattttg gcatgtttgt taattctagt ttcatttaat aacctgtaag gcacgtaagt 3540 ttaagetttt tttttttaa gttaatggga aaaatttgag aegeaataee aataettagg 3600 attttggtct tggtgtttgt atgaaattct gaggccttga tttaaatctt tcattgtatt 3660 gtgatttcct tttaggtata ttgcgctaag tgaaacttgt caaataaatc ctccttttaa 3667 aaactgc

<211> 5063

<212> DNA

<213> Homo sapiens

<400> 138

60 actaactttg aaattgcctt catgcccata tattggggct aatacatgtt aactggctgt 120 atgcaatctc acaacagact ccaagcttaa tgggcaatct gaattggtgc tttgtaaaat 180 tgcaaatgat cttgtagaag atcataggag cagaggttgt tttcagaggg gcaaaaaaac 240 tttgatttcc tacacactct aaaaatataa cgaaggatga tatggacatt ccaaaatgct 300 atcctccttg caaagtctct tggcctccaa aactggaaga cgtcactgat ccaccccttc 360 ccaacacaga aggeteatge tgetgtteac atggteatee atteacteaa ccagcateee 420 tcaagtgccg gctcccatca caccccagcc tgaaggcacc agtgcttgtg acattgccaa 480 tcactgccca aaccagagcc cattatgtcc cagaggcaga agattttcaa aggaattatt 540 tattigttaa aatacaatcc aacatatata taacatatti gtaccaccaa tattigcctac 600 atatgtttta agtatetett tgaggaatta aateagggaa aaacaattaa caetateagt 660 gcttagtgga tgacataatg gttaaaggta aatttgtctg aagtattagc tttatttatt 720 taatttaatt tttttttt ttgagacaga gtctcactct gtcacccagg ctggagtgca 780 ttggtgttat cttcactcac tgcaacctct gctttctggg ttcaagtgat tctcctgcct cagcetecca ageagetggg actaeeggeg tgegeeagea caeeeggeta atttttgtat 840 900 ttttagtaga gacagggttt caccatgttg gccaggctgg tctcgatctc ctgacctcag 960 gtgatccgcc cgtctcggcc tcccaaagtg ctgggattac aggtgtgagc cacaatacca 1020 gctttatttt gattctaaaa cttttttttc ttttttttt tttctgagag gatctgctct gtcacctagg ctggagtgca gtgatgtgat catagctcat tgcagccttc aactcctggg 1080 1140 ctcatgtgag attctcctgc ctcagcctcc caaaattcta ggattacagg catgaaccac tgtactcggc ctgattctag aacttggttg taagatgcat ataatgtcct tcattttaat 1200 1260 ttggaattaa tatgatttgg aagacacaaa ggggccacag ctccaaagag ctcccctttg 1320 gtcttgccac ggggccacag gtgggagaga gtcctgggtc tgctgggcct cctgagcatc 1380 ttcctccggt acaggcccca ggcagatgca ctcccgtttt cttccctcct cccaccctga tcaccagagg taggaacagg ccttgcagtc tatctttatc ctcatcgctg ctgcttgcca 1440

1500 ggcattctgt tgtttgtttt ggtgttttcc ccacctgttt agacaaaatg gcatatgcag 1560 agtgtgcctt aaaagaaaac aaaaaattga cacttgcttg aaatgtttaa agttcaaagt 1620 ctgttttgtg cttgaacaag gcctagaaat aacatgatgt ggcaccgcca ttcttgccgc 1680 ctggtatcag gaagtctggc ggccctctgg gcggtgagaa ccctgatgcc gccttttctg 1740 gtaactttaa gagcaggca gatttgccac acattctgag tgaaatgtta tgacggtctt 1800 gggtcaggga tcacaaggca ctggttgata caggtgcaag gaaacagcta tttaataatt 1860 ggctttttag ccctgtgcac agtaacctaa gaacatgtct cttttcgtat tcaaaaacct 1920 agtccaatcc cctgaatcta aagtagaagt tggaaaaaca aactcagtca aattattatg 1980 attatcagct gtcatttatg gaagacgtat tatgtgccag gtactataag caagcatgtg 2040 gctcacatta atccctttta atccctctag aatttctgta aagcagatat tattatccca 2100 ttttgcagat aaagaaacag tagtacagag atactaaatt actttctctg agtggcacaa 2160 ctataactgt tgaaacagaa atttgaactc atgcctgtct aacttctctt cttaagatct 2220 tagagtagct aagctgctgg ccaagcagcg tggaccatga ttccaagtcc caaagatctt 2280 ggggaagctg ttttaaattt cacttaaatt ttatacctta cattagttat ttctcctctg 2340 atcatttctc ctctatttat tttgagtata tttcacaaat ttataatcta aacagcttta 2400 gcctactttg aaaacatatt taacatagct ttcagtatgg aaaagatact cccaaaacaa 2460 2520 aaaccttgaa gcaagaataa aaaacatcag ctgctagatg aaagccaggg gctaattatg gcagaaacct aatcagaagg acacttagtt ttgcacttcc tctcagccaa gtcaacaggg 2580 2640 aaaaaatggc aggtgaccca tcctgtattc ataagacagc ttgccaagtc aggaaaacag 2700 tgctttcttg ttttatcaat gtttggaaaa ttaataattt tcacaagata acatttaagt 2760 taaaattcca attttatttt tacttcatca caaactttga atgtgtgacc acttaaaatt 2820 gctaaaacaa tataatgttg tcatttgcct gaaaaataat ggaagaaaat agccacaagc 2880 ctaccttcta catacaagga tctacaatca cttttgtgtt ttcctttttg ttcttttca 2940 gaaaacacat ttctctcttt tttccctagt tgtaaacata gtaggaatgc cacattgttc 3000 tctgctgtca gtgatacaag tattttccat gtagaaacag tgttcataat tatcactttc 3060 ctgaccacat aatgtgccat taaatagggg tggcatattt tcattaagta tttctctgtt 3120 ggcggccatc taggtcactt cttattttat agtaaaggta aggattacaa tgagtaatta 3180 gttcaacctt cagtttaatt ataatttaca ttaaatttat aaaattacct tcactaaaaa

3240 tctatatgca taaaaaagaa atttgttgaa ggcagaaaca acctgttttc caattttact 3300 ttccctagaa tatagtgtct taaaaatatg aagtactttc tcaataactt aatgaataaa 3360 taaaatgtag gtagcatcag gtagctcaaa agtggctgaa atcgatggcc tgggatgtcc 3420 cctctaagtc ggaaagaaca tgaatagtag taatcctata cctacccca agaaaacttt 3480 acattgaaat acttaaacta aagatccaga atagcacttg aagaaatcag aatattagaa 3540 gattgagggg gtgggggatg catatctgcc acagcttccc cagcccctcc ctcctttttg 3600 tgctgccatt tggagtttca agcacagaga gaagtgatgc ccattgatac tgctctgaat 3660 aaaagcccat gctgtaaacg tgtgatcgcc tatctatggg cagaaaggga cccttctctg 3720 gtactgcatg taattgttga aggcatctgt gcgctcactt aaggcccatc tgtaccctgc 3780 tecceagtga geegeeeget eteteceagt gaagteaggt geteagagea geaggetggg 3840 cgcaggatgc aggaaagcgc ctcttttaaa cattaggagt aattgactcg aaatgtataa 3900 tegtaacaac tectagaate tateattgte ttaatggaet atttagaatt tttgeetgta 3960 aaaactaaaa tatatattag tcttgtcttg gaagagttga tatttttcag agaaatcgaa 4020 tetgeactat ttatgggttt tgeactataa aactetgeag eecagteaca tggettettt 4080 ttcctaagcc atctgtcaca gaggtctgga attttatgtg aatgttggtt gtgcagtctt 4140 aacccaagtt ttttttatt tttttatgaa aaatgtcagc aactacaata tttagcattt tactttacgt tggtcattaa acttgattac tatagctctg tttcattgct atttacatat 4200 4260 cagctacgaa gccaaaaatt gttttgatgc gctcctggca gaatacattg tgagatcatg gagagagag acacgtggca ctgatatggt taatatcttg gatttttgta actaaggttt 4320 4380 attaatgctg gtataaaaat gtatttgata ttatacagat ggcataagat gttgtggtta 4440 ctaagttatt atcccggata agctgtactg ccaaattccg ggcttaaaac tatcacgaga 4500 gattaaacta tttactaaaa agggacagaa agatacggcc aaagcatctt agtacaacat 4560 attagaagcg tatttacctc ccacaaatat agtaaagcat atctatctca taggctgaga 4620 gattgaaaat acaaactttg caggtaaaat aagcaaataa aagaagggct tttattttct 4680 aagtcgggca caagcagcaa gcccagctga tgcagcccag tggcgcctgt ttgggggttg 4740 ggagtggggg gttgtttaaa gggaagagtt aaaacaaatc ccctgggaag tagctggtta 4800 ccacaagagt taaggatctt gctaaatatt caaagaagag tggccagcca agagaaaaaa 4860 agagagtagc caaattgtca agaagttaat tttaaattga tggatgatgg cgaaaatacc 4920 agaaaggtgt tattcgaccc atttagaaaa atgacaggca gcttcctcct accttctgag

aatgactgca cagtaatgtt cacaattcat gacaccacat gagccatccc agtgtgcgaa 4980 tcttgtagaa catacgaggc acgtgagcag tttgctggag cttgaaccaa atacagaatg 5040 gggtactgtt cctcccgaca cag 5063

<210> 139

<211> 4378

<212> DNA

<213> Homo sapiens

<400> 139

ttttcagctt	ttcttctctg	gtttctcccc	atctttgtgg	ttttatctac	ctttggtctt	60
tgatgtcggt	gacctacaga	tggggttttg	gtgtggatgt	ccattttgtt	gatgttgatg	120
ctattccttt	ctgtttgtta	gttttccttc	taacagtcag	gtccctcagc	tgcaggtctg	180
ttggaatttg	ctggaggtcc	actccagacc	ctgtttgcct	gggtatcacc	agcggaggct	240
gcagaacagc	aaatattaca	gaacagcaaa	tattgatgcc	ttatccttcc	tctggaagct	300
tcgtcccaga	ggagcacctg	cctgtatgaa	gtgtcagtca	gcccctactg	ggagatgtct	360
cctagttagg	ctacacgggg	gtcagggacc	cacttgagga	ggcagtctgt	cctcagagct	420
caaacgccat	gttgggagaa	cacagctctc	cagagctgtc	agacagggac	gtttaagtct	480
gcagaagttt	ctgctgcctt	ttgttcagct	atgccctgcc	cccagaggtg	gagtcaacag	540
aggcagcagg	ccttgctgag	ctgtggtggg	ctccacccag	ttcaagcttc	cccagctgct	600
ttgtttacct	actcaagcct	tagcaatggc	ggacgcccct	gccgctgcca	ggctgctgcc	660
tcacaggtcg	atctcagact	gctgcgctag	cagtgagcaa	ggctccgtgg	gcgtgggacc	720
cgccaagcca	ggcgcgggat	ataatctcct	ggtgtgccat	ttgctaagac	cattggaaaa	780
gtgtagtatt	taggcgggag	tgtcccattt	ttccaggcac	agtctgtcat	ggctgccctt	840
ggctaggaaa	gggaaatccc	ctgacccctt	gggcttcctg	ggtgaggtga	tgccctgccc	900
tgctttggct	caccctctgt	gggctgcacc	cactgtccaa	ccagtcccaa	tgagatgaac	960
caggtacctc	agttggaaat	gcggaaatca	cccgtcttct	gtgtcgatca	cgctgggagc	1020
tgcagactgg	agctgttcct	attcggccat	cttggaacca	agcggaaatt	ttttaatata	1080

1140 aagtgtttcc tcctctccca atgtcccatg tccctaataa tgagaatttg tgattacaat 1200 aattttaaga ggaaagaata cagttgctag cagaaagcca tgcaaattag ggagactgga 1260 gtgtgagatc tccccctcc tccagctgtt tttcttctac tgacagctgg cagcagggtg 1320 gggttacagg agcctctgcc ttctctgggc tggatgtgtc aaacctttct aactccaagg 1380 aaaccatcag cagaggcccc ctacttcctg cctgtgtctg tctgccagta tgcagacacc 1440 atgagatagg agcagtgctc aaagaactat gcatttgctt tggtatctta atcccaaatc 1500 cacttcaaga tttgggggaa aatgagcaac ctccagtgtt aagtgtgaaa agtcagttct 1560 ttgtggaaag catgattgaa ttttcacaat tgaggaactt gtcacagtgt gtgatctgcc 1620 cagaggcact ctccaaaaca ccaaaaattc tccaggaatg ttttcatctt tttgaaactc 1680 cagtttgcat ttccaggagc caggctgacc tgtgtgcaca gtgttctgta aaggcagttt 1740 gttttttcag ttaaaggtgg tgggaggaac actggagtgg tgtccactgt tgagaaagag 1800 atgggaactc attcctgaag gaaagatggg cgtagagagc attaggctgc ccaggcatgt 1860 gggcaagcag tgagaacaga agtctttggg gacaaaagtc ctgtgctaga tttgccaaga 1920 gaaatatcaa ctgatctctt taaaatgaga tccctcccac cccctacttg gggcctggaa 1980 aatgtggtct gctaggtatg gagacaccaa ataaacagta ctgaggctcc ctgtgtgtca 2040 gtcaccaccc ctggcaaatg ccaaaatgcc tcactttgct cgaggaattt acaactcaag 2100 gtgtttgtgt cacaggccaa gacgggagtg gaggatctgt ccatcagagg gcagaatgct tecectatge caaggegeet cetettgtat teaegeacag catttteetg aaactggtta 2160 2220 ctgagcctgg aatttctgtt aacgttcaaa ggcaaatgag aattaccaag ctgagacgag 2280 ggctgggggt atgctatctt cctttagtcc ctttcataaa agcccttgtg ctgtccagct 2340 gcctttcttt ccagaaggtg gtggtccagt tttaattatg ttaacagagg gagtatagct 2400 aaaaaacgac ttactccatc aaaatctctt ccgctaccaa gagcacggag accagcaggt 2460 ttggctgttt gaatceteec tgetetgeat ggettttegg aaceteggat cettegeett 2520 aaactcaggg gttaaaaccc taagaattaa acgaaataaa gtatctaaag tgagcacagg 2580 gcctggccta gagggttgag tttcctcctc ctcccggata agggaagcgg tgatgaggcc 2640 aggtggagcc cgagggcctt cctcggaggc ggtgcggca gcaggtgagg gctgcgccca 2700 ggagggtccg ggaagggtcc ctgggtgggg gagggggaaa ggggctgcgg ctccggccag 2760 cggggagccc tggcccgccc tctccctttt cggacctccg agggagaccg gccgagagct 2820 gggccaggtg ggctgcaccg aatggggaga agcggctgcg ggagccgcgg cggaatcctc

2880 agctggaggg cgccccagag gtctccggga tccttgtctc cctggctcct tggtaggcgc 2940 gggaggcgcc catggggctc cagccggggc ctaggaggcg gtgacagatg gctggggatg 3000 gaggaggcta agccccgggc tttctccccg gcgcccgcag gggacttcca ggcaccctcg 3060 acggcggacc gagctagggc gcggggccga tggtgcgggg acctccctgg gctttggggt 3120 catgaaaggc tcccagacgc tctggccccg caggcgctgc tcgtcactgg gaccgggctt 3180 ggttcgatct gggcaacagc agttacactg cggccgctgc tccgcccagg ccagggcagt 3240 gtgggggcgg ggaggaaggg gacgcatagt ttcctcgggg ctcctgtgtg gccagcctaa 3300 aagtggggtt ttcgtcgcct gtggtgaaat atctgcgcct cttccatcct cagtaaccag 3360 tactgatttt ccttagcgtc tcctgttatc caaagcgacc acaacctaca tgacagcccc 3420 actagaaget ttgaggtgac attetetgga atetegattt agetgtgeaa caettggeaa 3480 attgacttcc tgttcctcgg atttctcact tgtaaaacag acactgtaat accatctact 3540 ttgtagggtg aatgtcaata ttacatgaaa tcatgggagt aaagcatttg gtagatggtc 3600 actcaatgaa tgtgatgatt atggcaagga gttgtttttc aagggaaact tgcctgtgaa 3660 attggtttaa tacatttatt catctgcatt ctttgtttct tttctgtcct aagtaactac 3720 acaacaatga gcaggcttaa gaaaatatca actttggtag atgctaaata ctgcttagga 3780 cgaagtaaga catctttgac aaggcaagtc gcttttaatt caaaagaatt ttgagaaaaa ataatttagc ccccttcca aagataagag attacagtgg tagtttctat attcattaaa 3840 aaacttatgt ttttaaaatg gaaaaaatgc tctgaccggt gacaggttta ggggagttca 3900 tttcacaagt gtctggagca acagttaact tcaaggtcaa cgtccagaca tttggccagg 3960 4020 taaagaatca tttcccaatc atttgctgtg ccagtgtgga atgtaaacat gctgaataat 4080 tgaaaacagc tgttgttact gtaatagtca ccctctgcgt cctttcctgc tgttttccac 4140 gtgctctatc ccccaaatct aaaaggctgt aagccaatat cactaatagc aaaggtggtc atgagggcat ttttcctcct tctgtgactc atttctttct gtgtgagatg actccgtaga 4200 4260 cacaacacaa ttgagtcttg catgttatct acccctttat ttaaaaccca aagaggactt acaaaaagag aagaaatctc tttaaaggtg aacaatgcag tcaagttact tgctcacaat 4320 4378 catatttgta ggctagcttg agaggacttt gtattataat aaaaagtttc tgaattgc

<211> 4546

<212> DNA

<213> Homo sapiens

<400> 140

60 tggttggtgt ccactgttgc taacttcatt tatatgcttc ataatgggca cattacatat 120 agtettgtat gtateageta ttacattgta aaagagaaca aaatagaett tttetatetg 180 aaaacatcaa gtaagggtaa ggaaagagtg aggtagggtc gctatgaaaa ctaaagcttt 240 ctcaagttgg gtggtcacgg agcaccctgc ccaggtcagg aggccacgtc cacatggcac 300 aggccctgca ggaccacacg gcagggtgtg cgtgggaaag caacagagga cctggagtgt 360 tettggagea gaggeteagg eettagagaa tgagtgetge tggetattea ggeaeaggee 420 accaccettt attitttea gtettetgee aacatttaac tteettgett eetecatgaa 480 gccagcettg teeeggagtg agacaggett cetttgeeae getgeaggte etetgtaaca 540 cagcetetee eetgggetea gegggettga ggeteaetga gagteaggaa ggeaegtetg 600 ctgcacaata ccgcaaatgc aacccagagt caacaggaag gatttcatat tagctgctgc 660 cgggatagct acttctgttc attagtgtag ataattgata tgtgagtgga accgtatcat 720 ttcgagatct taaaaagttc catttaaaat cctcacctcc caccactacc agccccctta 780 ttgaagatga actgaaattg tattggactg cccttcctcc ctcatgggtg gaggatggat 840 teatgtgtet eeegaceage tataceagee teageetget ggetetaeet teeteeeea 900 taatageete etgeatetea ttteeetaga eeetggeeta tggggaeatg aaceatgagt 960 ggattgggaa tgaatggcta cccagcctgg ggctcccgca gtaccgcagc tacttcatgg 1020 agtgcctggt ggacgcccgc atgctggacc acctcaccaa gaaggacctg cgggtccacc 1080 tgaagatggt ggacagcttc catcgaacca gtcttcagta tggcatcatg tgtctgaaga 1140 ggctgaatta tgaccggaag gagctggaga agaggcgaga ggagagccag catgagatca 1200 aggatgtgtt agtctggacc aacgaccagg tggttcattg ggtccagtct attgggctcc gggactacgc aggaaacctg catgagagtg gtgtgcatgg agccttgctg gccctggacg 1260 1320 agaacttega ccacaacaca etggeeetga teeteeagat eeccacacag aacacecagg 1380 cacgccaagt gatggaaaga gagttcaata acctgttggc cttgggcaca gaccggaagc 1440 tggatgacgg ggatgacaag gtgtttcgcc gcgcgccctc ctggaggaag cgcttccggc

1500 cgcgggagca ccacggtcgc ggcggcatgc tcagcgcttc cgcggagacc ctcccggcgg 1560 gcttccgtgt gtccaccctg gggaccctgc agccccacc ggccccgcca aagaagatca 1620 tgcctgaagg tgagtaacag gcgggctggg catggccgag gcccagccga gcgcgggctt 1680 cttcctggca ccccagggcc gggccgggtg gagaggggcg aggccgaggc tggtgccccg 1740 cgctcctgcg ctgcagctgc actaacgctc cgcggggagc gtgtgcgcgc actaacccgc 1800 cgctctgtgt gttctcccgc ggctgccgac ttctcccagc cgggacggcg gggtcgcaga 1860 gactggagac ctccacggtt cggacctact cctgctgacc ccccatcctc ccgccccggg 1920 tctgacgggg gtgtgcccgt ggctcggggt aagtgggcca ggcccgggga cgcgggcacc 1980 ttgctgctgg ccctcggccc cacgcacctg cccttggctg ccggcctggc cctgccgctc 2040 cagteceget taccageact geetggettg eccetteetg ettegtetgg eetggggege 2100 tttgcgcttg gagcacgctg cgttgccgct gtcgcacaca tcctacaacc tctctctcag 2160 atgecetgea acctgeetea eagtgegatg cetgtetete tetetecete ageteaetee 2220 cactatetet aeggacacat geteteegee tteegggact agecatggee eecagggetg 2280 getteeteet tetgggttte acaggeteet etggeeetga ecceteetge tegtteeeet 2340 teetteegea geteetagte tegteegtga ettteeggtt geeetggate teagaatata 2400 ttegtecace ceeteggeae eccattacee egagteceae egtgtgteeg ttgtaagtee ggtggatgtg gctggggttt cctggtattg tggaggcacc caggttgtcc atgcttggga 2460 ttctggggga aggagagag ggcagctcag ggtggatgtg aagccaccct tcctcttctg 2520 2580 gacccagcct ggtctgcact gcaacctcca ccaggaccag gatcctgggc cacaggctgg 2640 gatgttcctt ccaagaaagg gtcatttcag acgcagccct gcttgggcta ttcaatctta 2700 gggtgtctat ccacgtctgg ctgtgccaaa tggtctggca gctggttttg gcatccccag 2760 catcaccact ctcccaaccc atcaccgtga ctgcagttcc tgcccccatt ctcttggggt cagggagggg ctgggaaggg ctactgaagg ccccattctc ccacaggatg gtgaggctgg 2820 2880 gaggaggaag actgaggtag agattccagg ccctggcata agctgaatcc caaatttggg 2940 tttgggaaga accagagaga aatggatccc tgagctctga gccaagggtg aggatgggga 3000 aactctaagc tcccacctaa taagaagcat aggcagacca gccagaggga gagccaatgg 3060 cctctggtag ccttaagccc aaagggcagt gggaatgtcc cctgccccaa ccatcgggtg 3120 gageteetge tgggetatgg ggaagggagg ttgtgeggat ettgaeteta gggeagaaca 3180 gatctaacca tgcattgcta gctctgctcc cagcatccct tccccttctc tcctcctctg

3240 cctcacttct ttagtaatcc caaccctata aaaatgaacc taatgggtgg attgaatata 3300 cattgagccc aaagtcaagt ttggggaaaa ggcagactaa ggcctccttt ctctgacctc 3360 ccaggaagaa aatagcttct cctacagtga ttcatgtccc aggtccagga aatccaatgt 3420 tggtgaaggc agccactctc ttgcttgtcc ccaaatcacc taaccctcat ccagggctat 3480 tttggtgggc agggactgcc tcctcccgga attcctaaga tccgcccagc tgccaccatt 3540 ttcattgctt tccccagcag catgatggga acccaagctg agggatacag gtcctgattt 3600 ggtaggaata ttattcccaa gaaatacccg ctcctcacct actccctcat cctaccaagg tgcctgaaaa tgttcaagac ttatgttcag ggtgggatga tggaaccgag ggcttcatca 3660 3720 3780 catcctacag gtggctggag cagctgcttt gcaacctgat caccttgagt tctgagcagg 3840 gactaggctt gcaggtgaga taatgggcca gggcacccag tccagaagga gcaatggcac 3900 ctgggcagtg ccagggctta aagcccgctg ctccttttcg gtagaggaga ggcccatcac 3960 tggtgtggtg gggtgggctc tcccttaggc ttgggcaagg cagccacctg cccttgctct 4020 cccttagtgt tccctggcct ccctgccatc aggttgctgg gagtggagat ggagggatta ttgagcagaa aatgagttgg atggagataa acagctccca tccctgggta atggatggta 4080 agatgatgga gattcctaag attggtggag ttgggcaatg catagccatc tgactccttc 4140 agggtgctct tgatgggctg gctgtaaggg agactcagtc ccagcctctc ccctctacaa 4200 ctcctgccac tgttggccat gtcgtaaggc agcagctgtg ccaggatagc tgggtccatt 4260 cagagcacct tgagaagtgt tgcagggagg tgttaagaag agaaatctgt gcaaacagtg 4320 4380 atggaagget gttgtettgg tgtateeett geeteatagt caatatattt ttttttggeg agtcaccagt gacccgagcc ctccacacca gcctcctgta tctcatcagg tcccttctca 4440 4500 gtactgtatt tgctcagtgc atcaggaatg ggtgtatggg tgtgtgtggg tgggtgtgag 4546 tgtgggtgtg tacgtaccaa taaacaacct ggttttaaga caatgt

<210> 141

<211> 3891

<212> DNA

<213> Homo sapiens

<400> 141

60 aagaagctgc taatcactgg cacagagcag ttcaatcaga aaccaaagaa ggggcaggaa 120 caagttactc ctatagccta ctgaggtgca gcccgctggc actaggcaaa aagcacttat 180 ggcacctttt gatgaacaga cttcttttt ttaagagtca gggtcttgct ctgttgccca 240 ggctgaagtg cagtggtgca atcatagctc actgcaattt tgaacttctg ggctcaagca 300 attttcctga cttggcctct gaaagggctg ggactacagc ctttgggaca gtagttttga 360 ttaggetete caaccacata getatgetet gggacttetg gagaagaaaa caaacaattt 420 ggtcaacaag gactctcaat catcaccatc tagtctcatg cattagtttt attattattt 480 ttgagacaga gtctcactct gtcacccagg ctggagtgca gtggtgcaat ctcagctcac 540 tgcaacctcc acctcctggg ttcaagcgat tctcctgcct caccctcccg actagctggg 600 actacatgca aatgccacca tgcctggcta atttttgtat ttttagtaga gatggagttt 660 caccatattg gccaggctgg tctcgaactc ctgactgcag gtaatctacc cacctcggcc 720 teccaaagtg etgggattae aggegtgage eacegegeee agetegtgea ttagttttaa 780 tacaacaagg gctggtttta taatctattt tacctctaag cacttttgta tgttttttc 840 aaaattcttc acattttccc cctgcctttt caccccaaat ccattttcag ccaacccatt 900 tttctcttcc tgtgttgttc acaataacaa aaaggaaaaa acaccaacaa aaacccgttg 960 cacctcataa taggtctctg gacgaataca atagatacac aaactgacat atgccaatgc 1020 aaaaattaca aatattgtat caaaatgtta tcttgtggca caaaacattg aattacaaaa 1080 aacttacaga ttctaaaaca tgctgaaaaa gatgaccaaa tagcacaaat aaatggagca gacgtaatta atgtgaaaat tgaggaatat ggtaactctc atggttttca aggtttcccc 1140 1200 aaatcetttg gacetttcaa aaacttetat taaaaagtaa tgtatagtge teacttegee 1260 agcacatatc ctaaaaccgg aacaacacag agaagattag catggctcct gcgcaaggat 1320 ggcacgcaca ttcgtgaagc gttccatatg tttacatcac acaccagggc ctctcggcgg 1380 ggtgggggcc aaggggaagg agaacgttag gacaaatacc taatgcatgc tgggcttaaa 1440 acctagatga cgggctgatg ggtgcagcaa accaccatga cacatgtata cctatgtaac 1500 aaacctgcac attctgcaca tgtatcccag aacttaaaga aaaaaaagaa atgtataatg 1560 ataaaaagtt ggaaaactca gatatggaaa aagaccatga agaataccca taactatata 1620 aataagtaca tttatatata aacacacact acatgatgag cagacttttt ttcatacacg

1680 attttataca cgattgtgta tgaaaagaat atttcaggaa gaatacatat ccatgtaatt 1740 gcctttggcg agtggactga gaatgagtgt aagaggtgaa attcctcttc attgtgcagc 1800 catctgtgct acttgaactt tctctatcgt atattcagat aaataaatga aatcaacaat 1860 ccttctaatt ccacacatgc agaggcaact cctgttgcca ccttcagatg taactttcca 1920 caccetegte tateaatgtg cacceateat attttacaga gataggatea ggatgtteae 1980 attgtttcac agcttgtaag actttatttt taaaaatgtt aagtgacaca caaaatgttg 2040 aaaaaaaatc accactctat gtgatgcaag tccaaataca aaacattaaa acaaacaact 2100 tccttcccaa agccaggtat gggtttattt tattttttt ttaaccaggt tgccattatg 2160 aagaaattgc tgtgctcatc aacttacttt gaaccaagct gttctttact gaatgccctg 2220 aagtcattgg aaagtcaccc taccttgctt taaagtgaag aattagaatt gtttctctga 2280 agatgaggga ggtgcacgaa ggatgtcagg taccacagtg gtacggtttg gatcttaaat 2340 ttctaaagcc acgtaggcct tgattcaaac tccagtgtga atattcagtt gaatgaatct 2400 aaacagtttc tgaagcagtt taaggctcag tttttacatt gatggtaaaa gtaacatctc 2460 tectgeagga eggetetgtg aatggaagga aacagetega tecaggtete tagaegtgae 2520 aagcattgac tcagtggaaa gtcctgctat ttttgtggtt tttagaccag gcagatctgg gcatgactag aggaggtttt tcctgggacg cagaaggcgg ttgtaatccc agagtccgga 2580 tgccctcgtt agaattctgg gcctgtaatt cgccttgctg gggtgtcctc cgcaagactt 2640 2700 tcagcttctc tgatcctcat ttttcttatc tgaaataggc ctgtctcaca gagctaattc 2760 ccaaaacttc tgtgtttctg tggcagccgt gtgtatgcta ttgagaactg gacgggagtg 2820 aaagagagtg atgaagacaa cagtctatac agcatctcct attacctgtt agctcagtgc 2880 ttcatgtgca ttacctcact gaattctcgc aacagcccaa aaaggtagga actcttacta 2940 ttcccatgtt acacatgagg acatcggaaa aggcacaggc acgggggata cctcttgccg 3000 aggtcacaca ggcagttcaa gtaggggagc caggagggag actgggtcat ctgacttcag 3060 agectgeace cetaaceact geceetcatt gtetecettt tgttacagag gacetgttet 3120 tttaagatct tacagacgat ctgcactggg ttgaatagta tcgtcccaaa attcatgtcg 3180 acccagaacc tcagaatgtg acctcatttg gaaatagatc ctttacagat ataattagtt 3240 aaattaagat gaggtcatag tggattgaaa tagaccctaa tccagtgacc cagcagaagt 3300 aattcctccg actgccccag aacccatcgg ggccgacagc tgggggtgtg ggggcggccc 3360 tggaataggg gctgtggtgg tacgcctggc tgcagtggtt gtcaggctgc agtggttgtg

3420 gctgcagtgg ttgtggggct gatgggaaac tactaaagtt tgggggaagc aagtagaatt 3480 tcctaagaac ataatggatg gagaggggaa aacctgtggt ggctgtgaag gtcctgatgc 3540 cgtgtatgtc taattaatat cgtccgatgg ccatgaattt actgtaaaaa tagaacgtgc 3600 gttaacttca agcatgataa aagccatgtt aagcttaaaa agcttaaaag cttttgaaac 3660 ageteceagg ceaggegtgg tggeteaeac etgtaatete egeaetttgg gaggeegaeg 3720 tgggtggatc agctgaggtc aagagttcaa gaccagcctg gccaacatgg tgaaaccctg 3780 tctgtactaa aaataaaaat aaaaaaaatt tagccaggca tggtggcgtg tgcctgtaat cccagatact agggggactg aggcaggagg atcacttgaa cccgggaggc ggaggttgca 3840 3891 atgagecgag atetgeacte cageetggte aacagageaa gaeteegtet e

<210> 142

<211> 3537

<212> DNA

<213> Homo sapiens

<400> 142

60 gttatgttaa taaaaataaa tgttaaaatg cttattattt tgaaaataag cggttttgga 120 ttgtgtagtg agtgacttca gagaccttca gcccaccacc gcccacccct agagtgctga 180 cctccctgtg tgggcagtac aggtctggcc actccagagt caaggggtgt gggaaggaga 240 gcatgcctgt acctggactt ccacagaggg cagagcaggt ctgttttatt ttcggcctct 300 tgctactaga atgtttgacc ctgtttgttg ttctgttccc ctggtacctg gcacctagtg 360 gatgttttat catttgtgga ttgaatgttg aagactcagc aggcgagcca gtggaggtag 420 agaccggcgg tgaaaggatg ctgctgggct gtgggaatgg ttttctgaag tgctggaact 480 tettteatgg eccettateg teagtgggge geaateeaca ggeetaeect gtgtttgtat 540 ttcagaatta cagttattaa aatagtttgt gcaggcaaga actggtcaca aaccaatcaa 600 aggtgcaaaa tcaagaggcc agaaatagac ctcagtgtat ctggggactt ggtgacaaag 660 gtggcatctc agattagtgc agagaagaca tggtgctcaa taaatgatgc tggtacccct 720 ggctgacctt ttggaaaaag gtaatgcaga ctctctgcct tattctttac aacaatatca

780 atccaggtca aagcatgtta acgtctttaa aagactacag tatggaaaat tctggatgta 840 gaacggtagt cacagtcgta taataaaccc ccaagtccag cttcaccagt tactggccaa 900 ttacagecaa tettetttea teegtgeeca caeteattte cetteteett tattatttgg 960 aagcagacct ctaaaaggta cgtgctcttt acccccataa tcttgatacc cttatcacat 1020 ttaaaaaata gtgttaattc cttaatatca ctgagtagtg ttcatatctc taatatctgt 1080 ttctctctct ttaggtgttt cagcttgttt gaatcaggct acaaataaga ccatacactg 1140 tgatttgttt atgtgtctct taagtctctg taaatctgta ggtccccagc cccaaaactc 1200 tttgctttac tacagtttac tcgtgcacat ttccttcttg agacctacag tcagcgattt 1260 ctccaggatg ccctgcttct ttttagtgga aggtggtatt tcaagatcac tgtctcagag 1320 ctaccagtgc tagctctgag tggttggtca ttgtttctag acagaaagaa gaaattgttt 1380 taagataaaa tgatcttgtg tttgtatcga ttcaccttca aaactgtaaa atgacttctt 1440 aggtettaca tetgtaettt ettetteeta agtttagaat ettggttgte ageaacteea 1500 gatatgatag aattagcata tcacataatg actcattggc tttatcccgc aatagacacg 1560 caacagtete agaataacaa tgecagtget gecactaeca gtatgagggt caaaageaat 1620 ttaaggtggg tttgtttttg tctttgtgtt ttattttttg tgtcagctca aagcacttaa 1680 tgtaagaaaa tactagaaga aagaagtact ggaagaaaac ggccacactg gagtggaagg ttctttctaa gcatgaccta gaagccgtca ttagagagtt ggccaagacc tgattaataa 1740 1800 atttgaccaa attaaaaact cgctacaaaa aacttaccac aatcaaagta aaacctcccc agactcacac ctgagtatct aaagacacct cacgcaccac ctaccctgag tagccgtccc 1860 1920 tgtggcctct tggcgccctg ccggtgtacg ttgaattcca gggtgtggag ctgtttgctg 1980 tctttacaga tgaaaacact tcgaccaagt tgagtttctg ctccgaaatc atagtggatg 2040 gtggcagagc agtggcctag gcccatggtg ctgacatcac agccattctt gcaaggagat 2100 ggtaggatag ccactcactg ttcaggcttg agctttagcc agcaggcaga tgtccagctt gtccaagttg attagagcac ccggcccagc tgaacctgcc tcattctgcg ctcccctata 2160 2220 gaagcaccca cagctgccca ggagccgtga agggtttatt ttctccatga gcaacagcat 2280 gtgtgctcgt agagggcaga gcatgggatg ctccaaatcc agagggtccg ggctgtcagc 2340 gatcccagcc tcacttcatt ctccggttgg ctgttgacct tgccaaagtg acagtccctc 2400 cgtgtctgcg ggaccacctg cttcctctgt gttcagccca tgctccgtag cccttactgt 2460 atggaattcc tcacatgagc ctctctcgca gcctgttgca ggctactgaa ggaaagacac

cgtccctggc	atagaatggg	ttcggtaact	atcaacacag	caagcacagg	aggtgattcc	2520
tgtacgattc	tgtgttgagt	ggtgtgaaga	gacggatcat	ttggctcatg	ttagttgtag	2580
aaggtctaat	tcaagaatga	gtaccatctt	acactttcta	gaagtctgtt	acttaaaatg	2640
ttttctttct	tctaggtgat	atccgacatc	caaagcacgt	ccaacagacg	gatgtggctg	2700
cgacactggc	gatagcactt	ggcttaccga	ttccaaaaga	cagtgtaggg	agcctcctat	2760
tcccagttgt	ggaaggaaga	ccaatgagag	agcagttgag	atttttacat	ttgaatacag	2820
tgcagcttag	taaactgttg	caagagaatg	tgccgtcata	tgaaaaaggt	cagtcaactc	2880
accgtttcga	gctctgtcag	agctgtgtgt	ttccactgag	ctcgggtttc	tccgatgtgt	2940
ttctgtggta	tgcagtttgt	cacaggagta	tttttcatc	actactcttt	gatgatacag	3000
attgtgtttc	tgttttctta	gaactttgaa	ctatcaccat	tggcagcacc	ctcagatgca	3060
gttatctaaa	gttctttcat	aaatttattc	attcaacaac	tatttaccag	gatcttgtta	3120
tgaatgagag	gctgttaaca	ggcactggag	acagagcagg	tacggggctc	tgccctcatg	3180
gaaccttcca	gagggaggag	ggaaaaggaa	gtgatcgatg	gccgatggtg	acgagtacct	3240
taggaaaaga	ataaacaggg	ctgggtgcgg	tggctcacgc	ctgtaatccc	agcactttgg	3300
gaggccaagg	caggcggatc	atgaagtcag	gaattgaaga	ccagcctgac	taacacagtg	3360
aaaccccgtc	tctactaaaa	atacaaaaat	tagccaggca	tggtggcggg	cacctgtaat	3420
cccagctact	caggaggctg	aggcaggaga	atcgcttgaa	ccctggaggt	ggaggttgca	3480
gtgaactgag	atcgcgctac	tgcactccag	cctggcaaca	gagcaagact	ctgcctc	3537

<210> 143

<211> 4199

<212> DNA

<213> Homo sapiens

<400> 143

cctttctgtc ccttttgcac cctggctccc tctctaggct gcggtgcagt gaggacgctg 60 ctcagggctg gaggctggcg ggaggttggg tgtgatgcga ggctgtgttg ccggctgttc 120 tggggatgct gacaacatta gcgtggctca tgtttatcgt gggtctagct cctcttgtac 180

240 agacatggtc ctcttccctt cctccacgaa agcagaaccc tgatgcgtgg cggggcatgt 300 agctggccgg aatgaaaacc tgcatctccc agcttcctcc ctgacgctaa gtggagctga 360 gctgctaagt cgtggccagt gggttaaagg cagaagtgct gtaggaggact tccaggaaga 420 tggctaaaaa caagctgact cagctgggac ttctgggatg ggcccttttc tgccctgtac 480 ttttccagct tccttccacc tgtcctgtgg tcttgatggc tggagcacca gcagccacct 540 tggaccatgg agtggctttg aggctagaca ccatgcgtgg aggatgagga gcaggacagc 600 caggatetgg gteeetgagg acategagga getgeeacet cacceteaat cagteateee 660 cagattetee etteagaaag aaateagett etttettgtt tatgettett ttgetgggat 720 tgtcatatgc agcgaaacca aactgtggag tcccaatcag ctgatagaaa tgaggaaggg 780 gctccctcct ctgcacaact ccatggcacc acaggcccta gctggcaaga acatgaacta 840 gggtggggga gagccattgt tctaagaaat ggataaccac aagcagcctg cttgcacaac 900 ctcctgttac caaataccta gctctgcacg ttagctccag cagcatgacc ctgtctgcat 960 ggggcctctc cagcgtgacc ctgtctgcat ggggcctctc cagcgtgacc ctgtctgcat 1020 ggggcctctc cagcgtgacc ctgtctgcat ggggcctctc cagcgtgacc ctgtctgcat 1080 ggggcctctc cagcgtgacc ctgtctgcat ggggcctctc cagcgtgacc ctgtctgcat 1140 gtggcctctc cagcgtgacc ctgtctgcat ggggcctctc cagcgtgacc ctgtctgcat 1200 ggggcctctc cagcgtgacc ctgtctgcat ggggcctctc cagcgtgacc ctgtctgcat 1260 ggggcctctc cagcgtgacc ctgtctgcct gttgcctctc cagcatgacc ctgtctgcat gtggcctctc cagcacgacc ctgtttgcat gtcgcctctc cagtgtgacc gtttccacat 1320 1380 gtagectete cagegtgace etgtetgeat geggeetete cagagtgace etgtetgeat gtggcctctc cagcatgacc ccgtctgcat gtggcctctc cagagtgacc ctgtctgcat 1440 1500 gtcacctctc cagcatgacc gtatccacat gtggcctctc cagcatgact ctgtttgcat gtggcctctc cagcatgacc ctgtctgcat gtcgcctctc caatgtgacc ctatcaaact 1560 1620 tececetgge etetgeeest ggggaggtgg cettetetet geeatgetge etgetgttet 1680 cttgcaaggt gtcttcagac tttctttacc catgactgtc tcggtaaatt cttttaccac 1740 ccgtgacacc agccccagcc agttgcacct gcaacactgg ctgcagtgga ttccttgttg 1800 ttgatactcc acataacctt gctaggtgtc atatatgatc attctttaac agaggggcaa 1860 gctgaggctc agagaggtta aggcacttgc tcaaggtcac acagcagaga ggttgtgggt 1920 aagccaggct gctggcttag aacactgcca tggcatttct cagatcacct cgctcaggga

1980 ctcctggcag ttcccctgt gtcatagcgg tgagtctgtc caggacgagc cactccaggc 2040 taccgagggc cagctggagg gcctgcagac acttgctgtg gagtcaaggt ccacaccatc 2100 agctggaaga gaggtctcag gaggggcatt agtgtttgtc ctcgctgtga ttgcaccaac 2160 tgacaaatca gctgtgggac aatggaaaac acagcagcag cttgttactg agaagggagg 2220 actcagggtg gacctgaccc ctctgcagat ggcttggtga gaacgtggcc tgccctgttg 2280 gctcctccct ctgggtattg gaattgctgg gcagccagag gcttacctgg gcttactggc 2340 acccagggag gagaagccct gagctgtgcg gctgctgagg aaggctgtct gcaggggaga 2400 gcccaagcgc tgaaggaggc cagtgggctc agcctgatgt ctccattctc cttcctacag 2460 caaccagggt gctttggaaa gggtcaattg ccccacctta ccaggtaggg atgcaggagg 2520 gagagegage catteeteta acgteagtga ceatgtettg gtteeaaaac ceettaagee 2580 ttgggttgtc tatcagcaaa aagagaaggg atgtgctcag ggggtcttcg tggagatcct 2640 ctgctcccct cgccttgaat gtggagaggg cccaagactc cctagggaag gcagttgata 2700 cagactecag gtgtgecetg eteteteete ggeaceaete tgeageaeea caggeagtet 2760 ggggtgcaga taacatctct ctgggcacag ctttgcacca gggcatgctg ggggtagagc 2820 cacacttgca tggcctgtgg atccctgcag cctggggatt gggctgctat tcccactgca 2880 gggagggagg tggttggagg taggggctgc tcctacctag gtacttctgg cctcaccaga 2940 agaaggggga gggtttgcac attgagtggc acctgctcca tctttgtccc tgtatttaca 3000 tcattattct gaaggccaag agattggacc tgccggagct ccatgcacag accctgggca 3060 ggtgcatgtg ggcttctggc ttcctggtgt gcacagcccc ttctctccct tctggactgt 3120 ggcagtgtac tagggacatt gtagccactg tgtaaagtct cccgctttct gggacagttt 3180 tattcactca tgtgtgttga gagctcgttt tgtgctgggg tccctgggga gaacgctggg 3240 ttcactcata gttccacaac aagggacctg tggcctttgt tgtggacagg ggccaagagc 3300 atgtagagaa ggcactgaat gctccttggc ttccagggga aagatcagga ctggaaggat 3360 gtgggaactg cccaaagcta caggatctgc tgtctcaatg gctgagcagg gtgcagagtg 3420 catgcggctg tttgttctgt ggcactggta accttggcac ttctccaggt gtgaaggaca 3480 gcatgggagt gagcctgtga agttataggc agagtccagg cagccccaag cctgggtggg ttgtagctgt cagagtggca gcaggtggac agaggggatg ggctcggggg gaggcggggg 3540 gacccgcttg aatgggagtc agcctggggg catctcaatc cctctgatgc ctggtttggg 3600 3660 tecceageae taettageee acceeactga geetgtetgt geetggeetg geactggtga

3720 tgcagggact gagtcaggca gggcctgacc cagagagccc atgggcagac agtcttggtg 3780 ctgcatgccc gggcttaaac caacaagcct gattctgaat gtccacaagc tcttggctgg 3840 tggggccaca ggactgggac ccaagcctcc tagcgacatg gctgaggcca tctgtcatgg 3900 gtccttctct caggccacct ggttccctgt gactcacttg gtgttgacca ggtgcatgga 3960 tgcagagctg agcagacagt ccctgtgtcc ccagtctggt tgggggtgca ggggtctgga 4020 gcccatgtga gcctggtgag agcctgggaa ggaaccactt tttccatggc agagctgagt 4080 gcaaagcacg ctgttgcact gctctggtgg tggcatttta ctctgtaacc tattcatcca catactcatg tatttctcca cccacccatt catctactta tccacccatt cacccatcca 4140 4199 tccacttatc catccaccct accacacatt cgaagaaccc gtatacataa aatctagac

<210> 144

<211> 3479

<212> DNA

<213> Homo sapiens

<400> 144

60 ttaccetgce eccacaccae ecteageett tetgttteea geaetteetg gteatgacce 120 tgagececte etgeetgtee accagggtet etgggeceag gggtggteae tgggaaggge 180 acceaeacce tgtccttcca ggtcttctgc ctctgagtga gtggtccgag tggtcgccct 240 gtgggccctg cctgccgcc agtgccctgg cccctgcctc caggactgcc ctagaggagc 300 actggctccg agacccaact ggcctctccc ccaccttggc cccgctgctg gcttcagagc 360 agcaccgcca ccggctctgt ctggatcctg cgacagggag gccctggact ggagcccctc 420 acctetgeae egeaecete ageeageage geetetgeee tgaecetgga geetgeeetg 480 gtaatgggga gaggcagagg ccaggggaca ggacgggcct ggagtgcagg ttggggggac 540 ctggccggga ggggctaggc tatagagcac attgacctgc tacccctcct gcttgtctct 600 aaggeetgea ggatttgaag etgggggtgg ggteeaggea geagetagaa agagaagegg 660 gagagectag agggetttaa ggeetgeegg agegtttgeg aegaeagage teaaggettg 720 agggggaggc aagaggtggg cctgggtact gactccatca taccttcccc agactcatgc

780 cagtggagtc tgtgggggcc atggagcccc tgccaggtgc cctgcagtgg ggggttcagg 840 ctacgctgga gagaggcaga ggccctctgt ggaggaggct tccgggagcc atgggctcaa 900 gacagaaagc tgcaacggag ggccctgccc aggtgagagc tgcgaggccc aagacactgt 960 atteacectg gactgtgeea accagtgeee acacagetgt geegacetet gggacegegt 1020 teagtgtetg cagggaccet geogeocagg etgeogetgt ecceetggee agetggteea 1080 ggatgggcgc tgtgtgccga tctcctcttg ccgctgtggc ctccccagtg ccaatgcctc 1140 ttgggagctg gccccggccc aggcggtgca gctggactgc caaaactgca cctgtgtcaa 1200 cgagtccctg gtgtgcccac accaggagtg tccagtcctt gggccttggt cagcctggag 1260 cagttgctcg gcccctgtg gtgggggcac tatggagcga cgtcggactt gtgaggggg 1320 tcctggggtg gcaccatgcc aggcccagga cacagagcaa cggcaggagt gtaacctgca 1380 gccctgccct gagtgccccc ctggccaggt gcttagtgcc tgtgccacct catgcccgtg 1440 cctctgctgg catctgcagc ctggtgccat ctgtgtgcag gagccctgcc agcctggctg 1500 tggctgccct ggagggcagg tgggtacggg gtgctgtgtc ctgactccct gtgggggaag 1560 ccggcaggtg gggagggaag aggcggtggt ctgagtgtca ctgagcctgc cctgctgcag 1620 ctgctgcaca atggcacgtg tgtgcctccc actgcctgcc cctgcaccca gcattctctg 1680 ccctggggcc tcaccctgac cctggaagag caggcccagg agctgcccc agggactgtg 1740 ctcaccegga actgcacceg ctggtgaggg cctggccctg gggtggggag cagggatgag 1800 gaagggtagg gaggaggaca tgggaggcat ctgagtgtgc ttctgtcttc tcagtgtctg 1860 tcacggtgga gccttcagct gctccctcgt tgactgtcag ggtgagatgt ggctgtccat 1920 gccctgctgc acctccaaag tcaaggcccg ggactggcac tgaggaggag agacgggccc 1980 tgctcacaga ctagacagag cttcagaaag ccctccctg tctgtccaca ctgacctctc 2040 tctaactgga gacccagcac ccctgccga gggctccctg ggcactcagt gtggtctgcc 2100 ccacttgtgg gggcattccc tagcacacag tatacacaga gccagggctg tgatgccagg 2160 aagtggaagg ttctttccct gccagtgagg aaactgaggt ctggaggggt gagcggaaat 2220 gaggggcctg gcctggcagc ccccgggctg atagcatttg ccctgtgggg tgcagtgtta 2280 ccccatctg atcaagacca agggcccacc caccgtgttc ccagctctgc cacgctgggc 2340 tctgtgaatg cagacatgca gcatggccag cctccgggca gaccacccac ccccagaaca 2400 ggcagagaca gggcacagtc tctaggtctc tgacaggcag gtagaacccc agagggtgag 2460 acatcagtgc tgagaataga ggccgagtgg acaggattgg tcagggagcc ttttctggag

gaggtgagac	ctggcctggg	tccagctagt	gtttgggtgg	gtggataaga	aagatcagga	2520
ggtgtggttg	gaggctgctg	tggctgagaa	ggcaagatgg	ggacgtgtgg	gtgctcagct	2580
tgggagggga	ggaatcgagg	ctggatccag	ggctgacctg	aaagctgggt	tggatggtct	2640
tccctggcag	agtgcccct	ggggaaacgt	ggcagcaggt	ggccccgggg	gagctggggc	2700
tctgcgagca	gacgtgcctg	gagatgaacg	ccacaaagac	ccagagtaac	tgcagttcag	2760
ctcgagcctc	gggctgcgtg	tgccagcccg	ggcacttccg	cagccaggca	ggcccctgcg	2820
tccccgaaga	ccactgcgag	tgctggcacc	ttgggcgtcc	ccacctgcct	ggatctgaat	2880
ggcaggaggc	ctgtgagagc	tgcctctgcc	tcagtgggag	gcctgtctgc	acccagcact	2940
gctccccact	cacctgtgct	cagggcgagg	agatggtgct	ggagccaggg	agctgctgtc	3000
cctcttgccg	cagggaggct	ccggaggagc	agtcgccctc	ctgccagctc	ctcacggagc	3060
tttgaaactt	caccaaaggg	acctgttacc	tggaccaggt	agaagtgagc	tactgcagtg	3120
ggtactgccc	atccagcacc	catgtcatgc	cagaggagcc	atacctgcag	agccagtgtg	3180
actgctgcag	ctaccgtcta	gacccggaga	gccctgtgcg	gatcctgaac	ctgcgctgtc	3240
tgggtggcca	cacagagccc	gtggtgctgc	cggtcatcca	cagctgccag	tgcagctcct	3300
gccagggagg	tgacttctca	aagcgctaac	aggctccgct	gggtgagtcc	acagctgtcc	3360
ctcttgtgat	catgggactc	agcagcactg	accacgtcct	tccacgctct	ctcacctgcc	3420
cccaactggg	ggcccatgac	ttggcattag	catgttccaa	ataaagtgat	actggcaac	3479

<210> 145

<211> 4016

<212> DNA

<213> Homo sapiens

<400> 145

aagttgggga ggcccaaagt	ctggccctcc	ccggggctgc	ccttggctgc	gcgtcccca	60
cgctgcagcc gcgcgatggc	ccgggctggg	gtggacgtgg	ggctgggaga	ggaaggggct	120
cacggacggg cgccccatct	cccaggcggg	ctcctcggct	gctttctttg	ggaacagctg	180
gtgcacgtcc ccgcgcgccc	ctctccctcc	ggaattcggc	gaggattcag	ctggaccctt	240

300 tggccaccac ctccgccccg ggcgcgggtc aaagagcacc cctcgccctt ggtaacggag 360 acaaaacgtt cggggccgtc tagacaggtc aaggtgcagg atgcggcgtc cccgcggctc 420 cttccggaag ggggcgtgga gccgccaagg gcgccggacc gcgccgcagc ccgggccttt 480 gcgggctttt tccctctcca ccctctgctg atcaaagtag gaagtttgca tgacaaccgc 540 agtgaaaggg gctgaatcac aaatgaactc gatttctgca gtgttgatct atccagcctc 600 cattgtcccc tttcaggcgc agtatgaacc cttccggtgc cagcggccgc gctacattca 660 caggcgcgct cggggcgcac aaagggtctc cgcgcttcac cgccatctgg ccacaaatct 720 catcagcggc gcggcggt ccccttgaaa gcgcgggcgg agggtgcgct tgtgttcttg 780 agacccaggt tccattacaa accacccagc atcgccaccg gcgccccccg tttcaataag 840 gaagccactt tgtcaaaaca ttctaaaaga aacttgggaa gaggacgcgt cagagaaata 900 ccgccgccga ttaactatca gctgcgcctc ccctgtgcac aggtaacatc cctccttctc 960 ccccacgact cggctggagc ttgattttga gctgctctca aggcccaggc actcgaatcg 1020 gaagttaaat agcttatgga ctatttaata gaatatacca ccacacgtat ctaatcactc 1080 aaataccacg cttttaaaac tcatgaatgt tttaatcgct aaaaatgtct acagtcaaaa 1140 actgcagcct aagtggctca aagtgcacat ttcaaacaca agtagcgttc tacttacgct 1200 ttaattatgc cgttcattaa ttttcattaa gttgtaaaac atgcaaagaa tacgtagatt 1260 aacaaacaaa actgaaaatt tgttttatta atttacagaa acaaataatt aaacacgtat 1320 taatcactgg gaaaactata aaatgcagag gcagatttta aaatgtaatt taatcaagac agatcattag cggaaagatt acggaggttt tctttttctg tgatgcatgt attttaggta 1380 1440 ttatttcctt agctgataca tatacaatat attcatagta gtttctggat gtcaacagag 1500 tagcatttta cttgaaagtg aagagtagac gctgtcattt aaaaatatct aactgtaatc 1560 aagaaattca ttctctctc cctttccttc ctccctcccc cactctcgtt tcccatctga 1620 aaagtaaaca tacttgatac ttggggggat ggggacagag ccaggaggaa ccagggtctg 1680 atcgctgggg gctttcagaa acttaggcct tccttccatt agaacaccaa attccatcct aatacaccac ttaattcatg ttgagtagag gccacgctga aaactaattt ttcaattcac 1740 1800 agaacattgt gagctatttg caaaagttgc tgagcatata agttttgagc aaaattgtaa tgtttgtgtg tggaaggcct tccacaactt acttctgtgg gccacttgat ttatttccta 1860 1920 ggttgcacct tttggaaacc gttccccatg ttaaaacttt ctacctacca gtggattgtt tttattttga aagtgtaatt tgacatgttt gaatatgcta ctgttttgcc tattttaaca 1980

2040 caaatatgtt atggcaaggt acaaacgtgt gaatttctac aattttgtca gtctatgaag 2100 gctgactggc tttttgatgt gattcgctag ccctttagag taaacattct ttaaaagtag 2160 aaaatgtttg ctggcagcta gctcggagac actaccttac gatgttcgtt aaaaacagga 2220 aagggaaaac agccagcatg agacgagtgg agttcatttt tgcagaagat taagaaaaaat 2280 tttgatcctg aaatcccaaa gcatcaattt ttttgagaaa gtatttaaga aaaagatact 2340 tatgcattac agctctttat acatttattc aaatgtacat gattagagtt taaaatgatt 2400 ctaagtagct gaactgcgtt cagtacattt aaagactgtt cacagaataa ctgggctttt 2460 ttttcccct caaagtgttt tgattataag aggccaataa ggattgggac aagtggaata 2520 aaacgaagtc tttctatact gtgaagattt tgaatagtac ttgtcaataa agcacctcct 2580 attgtaatct tagggageet tgeetetgee etceaaggae tgteteagag atactaacet 2640 cattaaaata tgaatgagaa ggcctgtgta gccagagaaa acccacgcac tggcacagtt 2700 ttcttatctg ccattgcttt tacatatgga cttgtttggt acaagttata agtagaaaaa 2760 tgatccatga taatttcatt gctatcttag agtacccaag cactccaagt caatcctaac 2820 ttttcccaga tttgaacccc acctataact cttaatcata cttcctaaat gtagtgccta 2880 tttctcccc tttacgtttc ttctgaccct gtgcttgttg tgtgagcaat ggaatgggg 2940 tggggagata cccatagccc tactttagag tggaaagaag tacttgaaag ttctggcttt 3000 ggcttctcca gaagagaaga gctagggagt ttattacaga cctctatgat aacactttaa 3060 taacggccaa ttacagcatg cctccatgtt tgttcattac tgtgtctctg ttaatcttgt agtaaatttc ttgcttgata gctgtcacaa tcagcaggaa tacaattatg ttacagtgga 3120 3180 aactgtcgtt gtggtatatc tgtctctccc attacagtct gacaacctcc aataaatttc 3240 actcatcttt atcgttattt tggagtgtcc ttcagatatg aaaccagtac ttaacctgtt 3300 tagtgactga taattaattt cacattgtag caaagacttt ctttctagag gtttagttaa 3360 tgtaaaattt taattgcatt gtagcaatat tgcatctagt ttaatcacta acttttcatc 3420 cataaaaatt gaaatcactg ctgatattag ttaaaagtca atatttagaa gtgaaaattc 3480 aaageteett tgetetagge tacaacaggg gaageatgaa tteagaaact ettgtaaget 3540 gatgagatat ataattagct tttatgttaa ttgactgcta tgagtttgtt gtatgacact 3600 tcttcatata atatgcaaat agcattgact gtttagtttt attagacaat ataattagaa 3660 atctaaaggc actcatttcg atgaggaata ataaaggctg atacatttcc agtgttctgt 3720 atatcagaaa aaaatgaatt gcatctggac gtaataagag aggttttagc tagacattat

ttagggagcc caaaccacat ataacggaat taataggagt gcttccagcc accgtaaact 3780 ccatatttaa acacgtgaat ttgtggtgtc cataagacct tggggggaaa acacaaatgt 3840 ttcactacaa tttaccacaa ataataatat acttaatgaa aataatacct aaatgttgcc 3900 tgctataatt aaagtgaaat aagtcattct tatttaaaac aaaatagttt gcgagtaagt 3960 gttccagttc ttgttactca cagacattac cagtaacata tatgcttagg ttgttc 4016

<210> 146

<211> 3897

<212> DNA

<213> Homo sapiens

<400> 146

cagaaatttg	tatttaaaag	gttttttaa	agtactgatc	ttacagttta	caggcatacc	60
tcattttact	gcagttcact	ttactgcact	ttacaaatat	ttcatttttt	acaaattgaa	120
ggtttatggc	aagcctgctt	caaccaagtc	tgtcagcacc	atttatccaa	cagcatatga	180
tccctttatg	tctctgtgtc	atattttgtt	taatttttgc	aatatttcag	actttttcat	240
tattattaat	ctgttgtagt	gatctgtcat	cagtgatctt	tgttactgtt	caaattgttt	300
tcgggtgcca	cagactgtcc	atataagaca	gcagacttca	tcaacaaatg	ttgtgtgtgt	360
tcttcctgct	ccactgactg	gctattgatt	ccctcatctc	tctgtcccct	tgggtctccc	420
tattccctga	gacacagcaa	tattgaaatt	aggctagtta	atagccttac	agtgacctct	480
gagtgtccaa	gtgaaaggaa	gagtaggatt	tctatcactt	taaatcaaaa	gctagaaatg	540
attaagctta	gtgaggaagg	tatgtcaaaa	gccaagataa	gccaaaagct	agacctcttg	600
tgccagttag	ccaagttgta	aatgcaaagg	aaaagttctt	gaaggaaatt	aaaagtgcta	660
ttccagtgaa	tacactaatg	ataagaaaat	taaacagcct	tattgttgat	atgaagaaag	720
ttccaatggt	ctggatagaa	gatcaaagca	gctacaacat	tcccttaagt	caaaacctaa	780
tccagagcaa	tgccttaact	ctccaattcg	atgaaggctg	agaaaggtga	ggaagctgca	840
gaagaaaagt	atgacgctag	cagaggtttg	ttcatgaggt	tgaaggaaag	aggccgtctt	900
tgtaatataa	aagtgcaagg	tgaaacagca	agcgctgatg	tagaagctgc	acattatcca	960

1020 gaagaactga ctaagataac tgatgaaagt ggctacacta aacaatggat tttcaacaca 1080 gacaaaacag ccttgtatta gaagatacga tctacggctt tcatagctgg aaaggagaag 1140 tcaattcctg gctttgtagg acaggccaaa tctcttatta gaggcaaatg aggctagtga 1200 ctttaagttt aagccaatgt ttatttacca ttctgaaaat cctaggaccc ttaagaattg 1260 tgctaaatct actttgtatg tgctctacaa atggaaaaac aaagcctgat gagagcacat 1320 ctgtttatag tatcatggat tactgaatat tttaagccca ctattgagtc ctacggctca 1380 gaagaaaata tttctttgaa aatgttactg ctcattgaca gtacacctgg tcacccaaga 1440 gctgatatga tatacaagga gattaatgtt gttttcttgc ctactaacat ctattcgtaa cccatagatc aaggagtaat tttaactttc aagtctttta tttgagaaat atattttgta 1500 1560 agaccatage tgetgtaegt agtgataeet ttaategate tgagcaaagt aaattgaaaa 1620 ccttctggaa aggactcatc attctagata gcattaagaa catttatgat tcatgggagg 1680 aagtcaaaat atcaacaaca gtgtaaacaa aacttttgta tgcagtggga aaccaaaaaa 1740 tgtgtgtgac tcactttatt gcaatattcg ccttttttgt ggtagtctgg aactgaacct 1800 geagtattte tgaagtatge tgtattacet teatatgatt etteaceaet gaeatattte 1860 atattgttta cccagtctta gaaggggagt aaaaatgacc taatttttaa aattgtttat 1920 gtctttactc tggagaactt tgccatttta tgacaacagt ctcttttaga catcccatga 1980 atggaagcaa tgaatgaata catatctgta ttgaaagaaa agttaacaga aaactctgaa 2040 aaccagctag cagtggttgc tgtggcagca gaaggaaact caggctatca gtgatttcta 2100 gtgtgggaat ttaatgcagt tcagggaggg aaataggaag gaaaagagta ccagagaaat 2160 gageettagg tttactaggg ageaaagatg ttatgaaace acagecagtg acttaceatg 2220 cagattttat tttctaaata ccattcccca ctaaaaggaa ccagggctcc atggagaaat 2280 ggcgattcca gagctgggca gggaaggtac agatgagcct catactatgg cagagagaa 2340 ggaagggctg agaaaaaaaa agggggacac atccagcttg aaggggtgcc cattggaaaa 2400 atctaggaca gtctgaggat ctcaataagg atagtaatag atggtgtgaa taatgtaaaa ataaagccaa tgaatatcag actccctaat ctattctgat aaatagaaag ttagataagg 2460 2520 aaataaagaa ctgaggaaga agggaaagtt ccttacagta aaatgccatc taatatatag 2580 agaaggaaag atagagtttg cattgtgcca agcaaagtgt aaggcattag aggtacccag 2640 tgcttaagag agtgccctta gcttttttgc tactgtgaag ttagaaggag gcaaataaat 2700 agatactttg tccatttatc ttgtcaccat tacagttaat cctctcaagg acaagatacc

2760 tttataatgt attagggtaa tgccttagat tattaattag ttgaatgact gatgcattcc 2820 taagcactga ctgtggtata atgggttata ttaaatgtga gatgactctt taattcattt 2880 cattaatttt tttgttataa aagtaaatga actggtgaaa gtgtagggac ataaatgaat 2940 ataaagacac aaggcaaaaa atactaccta aaactcaact attaaatgag taaccaatgt 3000 ttacattttg gcatatttcc atctggtttt ctcacatgct tagatcatgc tgaatatagt 3060 ttttaaaaaaa cctttgccct ctttttaatg tgcctaattt ttaaatttca aggtgtttga 3120 ctttacgatg caaattatac tttgacaact tactatctca gcgggcctat tgtggaaaaa 3180 tgaattttga ccacaagaat gaaactctaa gtatatcagt tcagcctgga gaaggaaata 3240 aagctgcttt caatgacatg agagccttgt ctggaggtga acgttctttc tccacagtgt 3300 gttttattct ttccctgtgg tccatcgcag aatctccttt cagatgcctg gatgaatttg 3360 atgtctacat ggatatggtt aataggagaa ttgccatgga.cttgatactg aagatggcag 3420 atteccageg tittagaeag titatetige teacacetea aageatgagt teaciteeat 3480 ccagtaaact gataagaatt ctccgaatgt ctgatcctga aagaggacaa actacattgc 3540 ctttcagacc tgtgactcaa gaagaagatg atgaccaaag gtgatttgta acttaacatg 3600 ccttgtcctg atgttgaagg atttgtgaag ggaaaaaaaa ttctggactc tttgatataa 3660 taaaatgaga ctggaggcat tctgaaatga aagaaactcc tttatatatc caaccacaat caaacatata aataagcctg gaaaaccaac tacaaccagc aatttaagat tactattact 3720 ttaagaaaat caatttcata gtattggttt taaatctttt taagtttttt taatacgatc 3780 tatttttata ggttcttttt cagaagtaaa attttgtaca tatatacatg tacatatctg 3840 3897 tttagtttgg gttcatttct ataacatttt gtaagaaaat aaaagtttga gcacctg

<210> 147

<211> 3292

<212> DNA

<213> Homo sapiens

<400> 147

taggaatttc agtgcaattc cgtgaggtgg tgctgacctt agatgagaaa tacgtggcca 60

120 ggctataagg actacatgta gaattgagat gggacagtgt acgtatggac tgtgagggga 180 aagaaaaggt aaatgtgtga aaggaaagag attggtgcat ggtcatgaca gtctgacagc 240 ttagacattt cagaggcatt gtttatgaga aaggggatag ggacacatag gtctgatgac 300 aaccaaagcc ctttgatgat gccatctgtc actcaaggct ccccacagcc tgcccaacct 360 gactetectg cetgettete caetgeetae etteaacaat caaactgtat ttttgttaca 420 gcaaactaca ttccatttgc ctttaaatgc ttgcatttta gttattgtac tggctacctg 480 tttttgtctg cccagcatcc tgtttcccct ccttttggat cctctcctag ccaattccat 540 gtcttgaatc ctttcctgct ccttgttaaa attattttct gctttgtgtg agtccctgta 600 agcaccagca gctcaatcag cactgtctgt accatggtca agagatgagt acatgactca 660 ggtcagacct tatttcccac cccataagcc acaatgatta gacaagaaat aggcacagaa 720 ccctaactag atagggcaga agccttccat aggattttat ttgctggccc tgaaatgcag 780 gtagccttct atggctgtta aacacaatcc agtggcacat ggggtgatat gaggatggag 840 ccatccatgg caaaactcca ccctttcctg tgacatggat tatgtgcatc tgccatgaaa 900 aggaagcata cacaagaaat gagcaaagag ttcctggaga actgaagcaa gtatcacctc 960 cagatcagtt gtacttttat ttgcttacac tattctgagg tgggtctctg tctcttggat 1020 ccaaaagagt tcaaattaat aatcatttga caaaaaatta cctccacatt cctaatgaag 1080 ttgtctttga agataatgtc ttgtgatccc ctggttgaag ttaattactg cttgtgagcc cccattaaca acgtgttcct ttccccattg cttgcttgta tcagctttgc tgaagatcta 1140 ttggctgtag gtgtgcagct ttatttctgt gttctctatt gtgttccatt ggtctacgtg 1200 1260 tctgttattg taccagtgcc gtgctgtttt ggttactgtg gtcttatagt ttgaagccac 1320 atctgtgtga tgctgctggc tttgttcttt ctgctttggg ttgctttggc tattcaggct 1380 ctttctttgg ttccatctga attttagaat agttgttttc taattctgtg aaaatgttcc 1440 aacctctgtg aaaaatgagg ttggtagttt gataggacag cattgattct gtaaattgct 1500 ttgggcagta tggccatttt taaactatat tggttcttcc aatccatgaa catggaatgt 1560 ttttccattt tttggtttca tccctgattt ctttctgcca tgttttgtag ttctccttgt agagatettt eaceteettg gttaggtgta tttttaagta ttteagtttt tttatggeta 1620 ctgtaaatgg tattgggttc ttgatttgct ctcagcttga acgttattgg tgtatagaaa 1680 1740 tgctcctaat ttttgtgcat tgattttgta tcctgaaact tgactaaagt tgtttatcag 1800 tctaggagct tttggcagag tcttcggggt tttctaggta taaaatcata tcagcgaaga

1860 gagctagttt gatttctttt cccagttgga tgccttttat ttatttctct tgcctgattg 1920 ctctaagttg aatgggagcg atgagactgg gcatcctctt cttattccag ttctcagaag 1980 gaatagttcc agcttttgct catccagtat gatgtctgtg ggttggttgt agatggctct 2040 tattattttg agatatgttc ctttgatacc tagtctgttg aggggtttta tcatgaggga 2100 tgttggattt tatccgtatt caataaatgg tgttgggata actggctagc cctatgcaga 2160 agaatgaaac tggacccccc acctttcacc gtatatgaaa attaactcaa gatggattaa 2220 agatttaaat gtaagacctc aaactgtaaa aatcctagaa gaaaacctag gaaataccct 2280 tatcaacatc agccttggca aagaactttt ggctaagtcc ccaaaggcaa ttgcaacaaa 2340 acagaaattg gcaagtgggg acctaattaa agcactctgc acagcaaaag acactatcaa 2400 cagagtaaac agacaacata cagaattgga gaaaatattt gcaaactaga catccaacaa 2460 agatetgaca tecagaatea ataaggaaet taacaageaa aaaacaaeee cattaaaaaa 2520 tgggtgaagg acatgaacag acacttctca aaagaagaca tacaagcaat caacaaacgt 2580 gaaaaaatgc tcatcactaa tcatcagaga aatgcaaatc aaaaccacaa taagatacca 2640 tctcacacca gttagaatgg ctattgtaaa gaagtctaat aacatgccag taaggtttca 2700 gagaaaagag aacatttata cactgttgtg ggaatgtaaa ttagttcagt cactgtggaa 2760 agcagtttgg agatttctca aataacttaa aacagatcta ccattcaacc cagcatatgg gtttatttcc caaaaggaaa taaatccttc taccaaaaac acatatggtc atcacagtgc 2820 2880 tattcacagt agcaaagaca gatcaacgtg gctgcccatc aacagtggac tggataaaga aaatgtggta catataaatc atggagtatt aggcagccat aaaaagaaca aaatcatgtc 2940 3000 ctttgcagcc agccacatgg atgcagctgg aagccataat ctaagcaaat taagaacaga 3060 aaaccaagta ctgcatgttc taacaaatgg gagctaaata ttgagtacct caggatgcaa 3120 aggtgggaac aacagacact gcagactgga acactgtggg tgaggagggc agaaggatag 3180 gttgaaaaac tacctattgg gtactatgct cactacctgg gtgatgggat ctgtacctca aacctcagca tcacacaata tacccttgta acaaacttgc acatttaccc actgtttcta 3240 3292 aatgaaaagt tgaaatattt tttattaaaa acacaaaagc aatatgtttc tc

<210> 148

<211> 1528

<212> DNA

<213> Homo sapiens

<400> 148

60	tttatgatcc	gccaacagga	agaaagttaa	aataataaaa	ataaaataat	ttatggaaaa
120	cacagctccg	aataggaaag	ttgggtctcc	tgtataaatc	ccgactccac	aacacagcat
180	attgatgtcc	ccccaccaa	tgaattgtgc	cgttgcaggc	ggctggtgag	aaggggtctg
240	aaccaggtgg	tggggccttt	tattgggaga	acagtgactg	acttcccaat	taaccccagt
300	taattacaag	tctgctggtg	cctaatccaa	aagagccagc	atgaggtcac	tcaaggtcaa
360	agggaggcct	caagccaagg	cgaccatcca	tacagagggt	ctcagacatg	gagattagga
420	accccaggag	tcggggctaa	gtgtgtccct	acaaatgatg	aaccctgcca	ccgggaaacc
480	gcttgggctg	gtgtgcgctg	ctgctcagcc	tctcgggtcc	tctctcttac	gcctctgtgc
540	attctgggcc	ggtcaaaggt	aagtcatcct	cccatggggg	ggttgacagg	gcttgctgga
600	caagtccagc	gatacaggag	gctgtggaca	cacagtccaa	accccagcc	agccagcaca
660	tcatgaacta	gttcataact	tgtctagctg	tcagcagaac	caaattcaga	caagatcagc
720	ggttatacag	tgccatggtt	ttctaaatgt	tgttttaagc	tggttgtttc	taataaataa
780	caccaccaat	ttggtactcc	aatgtcttta	ttcccagagc	ctgatagacc	caataactaa
840	tgcaaacttc	gaggaataac	gacccatcct	gttactccct	acttatctca	gtataagaac
900	ttgttcccca	agactgctta	gggtgtgtag	ggtccagggt	gatcttcaag	tgattttta
960	gcatttccca	cattttagct	agaaccctta	ccatagtact	tctccttctt	acatctggtc
1020	gtataagtag	aaccaatgag	actaggttcc	tggccatgtg	ctgctaggtg	gtctcccttg
1080	gttttgccac	tcagattctg	actactgcat	caggagatgg	ttgccacttc	caacatcata
1140	gtttcctcat	tggtgcatca	ttagtttctc	gaaaggtgac	aggaactttg	ttctctgttg
1200	tgaagtaaca	tgtcaagaag	cttatagtgt	tagtatctgc	gggataacga	ctgtagagtg
1260	agatgtggtg	gctaacagcc	gaatgtggtg	gcttatggct	tttagaacat	caatgatgca
1320	ttgaggtcag	ggcagatcgc	ggccaaggtg	cgctttggga	gcaatccgag	gctaacgctt
1380	atacaaaagt	tctactaaaa	aagccctgtt	cagcatggtg	ccggcctggg	gagcttgaga
1440	aggcatgaga	cagggggctg	ccctgctgct	cacctgtggt	tgctggtgca	tagctgggtg
1500	tgcaatccag	attgtgccac	gtgggccaat	aaaggttgca	cccagaggat	atcacttgaa

cctaagcagc agagtgagac tctgtctc

1528

<210> 149

<211> 3904

<212> DNA

<213> Homo sapiens

<400> 149

60 taatteetge accagetgeg geetttatet geageeagaa ageagggttt accgetggee 120 ccacagegee atacggtetg gggaaaagaa ggaaacccaa tagtacacaa acaaaggeee 180 aaagagaaac cttccaagtg ctctatgcct cgcggtttag cagaaaatat caagcaactc 240 teaacetage tggtetgtag ettecacaaa tgaaataetg tatteattge ageetttetg 300 gttgagatat ttcaaatatt tggtggggct tttaatgaga cggagagaca ctctcgagtg 360 tggaagaaaa acgtgagggg gtgtgaggat aaggcgactt taggacagaa aaaacaaaga 420 gacaaggaag ccacgtaaac gttttcgggt aggcgtgagg cgatgtcagt tttgaacccc 480 gttatgttag gtagagagcg cagccctctt ctagcacaaa caccgtttcc cacattgaag 540 aggtcgcaga gatcagcaac tctagagtgc gatgaaggag cttcgctctg ggagaacccc cttcgtgacc acggtctctt tcctgccagg taagtgggaa tgagcgcatg ccctgcaggg 600 660 acagcacage gtcctcgccc tggtcggacg ctcagggtca ccaccctacc cactgccccc 720 ctegecatte ttecaaacca etetetgeca aagatteeae egacagteae eecacaegae 780 aacccaggee geettteage agtggeteee geeeggaac caegegeeet eteacceeeg 840 eggttetgee egeegeetet gteeagtetg tgeactteae eteeetgget eeegetetee 900 cctgagctta cagtggacgc ggggttcttc caaacccctc ttgggaatac tgaatggaaa agggggagcg tgcgcaagtg cttggtagag tgtagacatt gtgggatttg actgtggtac 960 1020 categetttg aegteetagt getaattttt aeaectgeat tetgettagg geaecggeaa 1080 cagttttccg tttgtgccta ctccacctgc tgtctttgtt gggtcagcga acatcgcctc 1140 cctctaccgc tcaatcagca aaagggaccg cccttgagga cctcacccgc ggctcactcc 1200 cctcccaact tcgcgggcat cgcctccggt cgcctcttcc gaaggcctaa cgagcatgtt

1260 agctgcgaac ggaggtgagg aggctccgct gactgaccgg tgcccatgtc cagggcacgc 1320 acaaacgcca tgacttggct tggcctctct cttagttatt cacaagctca gcccgatagg 1380 cacctctggg gcggcgacgg caaagagggt gcgcttatta agtgcagctc cacggggact 1440 ggcctctgca cggctgtgta cacctgagcg agacgctcag tcgctctcta aagccgcttc 1500 tgcggatgac agacacggag ataaacgtga gaggtggccc accacgactt gccctccttt 1560 gcccgggttt gcccctcgct gcggaggctg ttctacatct ggcccttgga gcaggccggc 1620 tgacagcgtg gtaaaggaag atttctgcgg gagggcggcc agtgcaaaac aattccctga 1680 ccgggaatcg aacccgggcc gtggcgcttt cagcaccgaa tcctagccac tagacaacca 1740 tgcagatgcg gaaagctgct ttctctccct tcttcgacct gaagcgacac tttcctgtgc 1800 tctaggagga cttgggtctt gtgagagtct ccctttgctc ctggagtcgt ctcacaaggc 1860 cgttcactcc ctgctttctt caaaaaaaga acctgcaggc gacacaccaa gggctccacg 1920 agggagtect gagtactgga gegagttgeg gecaegegge egeageteae eaetggeeta 1980 gagatgccct ttgccaggcg gcagcaactg acaagatggt cgcgggtcgc cgggtccgga 2040 gccgcccacc aggttgccag gaggaggcgg gagcggggag gcgcccgagg tgagacgggg 2100 gcaccetetg catcataaag gacceagace eeggcaccet caacatcata aggaatcaga 2160 cggatgcgga aaccgaggcg ggctggatag gaaactcttt ccaggaaggc tccggggcac 2220 teaactggtc tecaacettc ceetgeaace tgtgacgect gecattttec cattttagge 2280 gatggcaacg caacccctcc gtttgctctg ggcaaaactt cgagagttcc ctctgaagct ggagettttt ceteagatee aagateeaat tggteaceaa ttegtgattt eegteggeea 2340 2400 agtgcgtggg cattgatcta cacgcgagtt tctccacctc tgccgaatgg ctacttcggg 2460 gtgggggagg ggccctccca ccgtggattg caaggtgttt agcagcatct gtctcctccg 2520 ctgactagac acatgccagg gggataacat tctccctccc gcttccccca gccgcggcct 2580 agtgtcccag cggggttggg agaggcatgt gagggcgaag ttgccccctg ttgagaacca 2640 ttgctgcgcg tagtccttct ctctgaactt gtgcagagga ctctccaggt gaaggctcaa 2700 gggtggatcc agctcgagac accctcgctc cccctcacag tcggacctta ggatttaggc 2760 tttaacatct ccacatcatg agattcgaaa cctttaggtc ttgtcttccg ttctgtcctc 2820 caaatcggcc tcttccgagc ctgttgacca gggccagccg ggcagagggc tgggctcgct 2880 caacgagget cetetegeae etcetggage tteaggette ttteegttge agagaagett 2940 tatgggccaa ttcgttcggc atccccgggg gcaggtgcgc ggtgcgcggg gaagaagagg

atttgactgc	ggttctccac	ccccggcgcc	caacctccac	cccggtgcgc	gcgctcttcc	3000
aggctcctgc	tggtcccact	tgccaggagt	taggtctcag	gtcagcctga	gctcctggga	3060
cgcccaggcc	cggaaagaca	cgtaggggaa	accatctgct	cacttctgtc	ctgtccggaa	3120
gggatccctt	tctgacggga	aagaaaggcg	gtgagtcctg	tcctgttgag	taggcggaag	3180
agagatcaaa	gggaagacaa	gaaaaatcct	gtgagttttc	aggatctaaa	gttaccatga	3240
ggtcgaccta	acctcctctg	gaggtcctcc	cggtcctccc	gtggctgtcg	aaggtgaatc	3300
tagcttccgt	ctccagttcg	ccaaggcgga	caaagccgac	gacaatgggc	ctgtccacta	3360
tcttctttca	tatgcacaaa	atgtcagctc	ttcttgtttc	taacttgcaa	catcccacct	3420
gatgaccagc	tcagcaaatt	agagaccctc	catgggattc	catctctgtc	ttagttcggg	3480
cttccataac	tatataccat	aaactgggtg	gctaattcac	gacagaaatt	tatttctcac	3540
agttctggag	gttggaagtc	cgagatcaag	gtgccaacat	ggtagggtta	tgatgaggga	3600
ctttttctg	gttgtagact	gccaccttct	cattgtatcc	tcagggggca	gagagagctc	3660
cctggggtcc	cttttatagt	ggcattagtc	ccactcagac	taacgggact	aaatccagac	3720
ccagttattg	caatgtgtgc	aaaagaacaa	ggacttgtac	tatctgactt	caaggcttac	3780
tataagctat	tacagacaag	gcatcaggag	ggacaaatag	ataaacagac	tgagttaaga	3840
gacctgaaac	tgatccacag	ccatacagtc	aataaatgag	ctttcaatga	aagcagttca	3900
atag						3904

<210> 150

<211> 3564

<212> DNA

<213> Homo sapiens

<400> 150

ttctctaaca ttccagcctt tcccttctga cttgaaattc tttctcatca gtggcgccca 60
agtagatacc aggtttccat ctgagcccag gatcctgtgc aagggtaggg tgggagcacc 120
tcccaggaag gcctcgcacg tgggggctga aaagggagca ggtggtggga gggggacagg 180
tgcgtctgcc agggaggagg tgtggaagta ggaggaagct gtctgcctat aggagcatgg 240

300 gaggagcagg actgaggaga gcagaaaggc tctggaaggc aggaccagga cagtcagggt 360 gtgagggggt cttgtacagt cctgcccctc acccaaattg gcagagcccg tgcactcctc 420 ccatttgggg cccctcctc accccagttg tccgtctgcc tgcacacgcc tgcgtgccca 480 cgtcggcatg gcctggccct ccttcttgta ggggcccggc ctgggagcct gtgtggccct 540 ggtgtagacg aggtgtggtc agagctgagc tgagcagcgc ccacgctgca gcaggagggg 600 agggaggaac tcactgggag ctgtgttggc cacactgagg gcccagggct tcgtggacac 660 cagcagcact cctggccaca ctccagccct cctctgggta caggtggcat aggtggcatc 720 cacccaccc cagcattcta atagcccagg catctcctcc tccaggccct ggtgcccttc 780 cacaacctgg gccttctcat cggcctcttc tccccacggt gtgcggacct gtggcctgcc 840 accegecagg aggeogtgga etgtgtetae teeetgetgt acctecaget eggetatgag 900 ggcttctccc gggactaccg cgatgacgtg gcggagcggc tcctcagcct caaggacggc 960 ctcgtgcacc ctgaccccgc cattctcttc cacacctgcc acagtgtagg ccagattatt 1020 gccaagegcc tececeaga ecageteate ageetettge taaceatgtt tgaggeeetg 1080 ggagaccccg aaaagaactg ctcccgagca gctaccgtca tgatcaactg cctgctgcag 1140 gagcggggcg gtgtgctcca ggagaaggtg cccgagatcg tgagcgtcct gcgctccaag 1200 cttcaggagg cccagggaga gcacgtcctg ccggccgccc agcacagcgt gtacctcctg 1260 gccacccagc actgcgcagc cgtggtgtcc agcctcctgg gcagcccctt gcccttggac 1320 aggtacccag ctcagactcc aggcttaggg gtccctctgg aatgatgctc cccctggaat gatgctcccc gagccctcca cccggctctg caccccgact ttctgcatga gttcccatgg 1380 1440 ctgtaggcca cgtgggacag aaagtgacat ggagccaggc cccagtctct caggtaccca 1500 cggggacctc tcctctccag gcgttttggg atcctcactg gctccggtgg gccctgcaca 1560 gcaccccac agggaagctg ctgtttctgc cttcctctaa ggtcccaaaa ctgcctggct 1620 getetgttgg ceceaggete cageacaeae tggaggetge ceeteaceet gtgtettggt 1680 teeggetact ecaageettg teetetgeag ggeateeact getgeetgtg ageagaeece 1740 tgggaactgc ctgatctgag ccccctcagg agcccaagga caaccttgtc tgtaccatac 1800 atcactatgt cttcccaagc tcacacctcc cagctcccag caaagggcag ggcgtgtcta 1860 ccaccacca gcccactggg gtcccccttc ctcgccgagg cctccggagc atgggtctgc 1920 tggcccttcc tttctttgcc atcttagtca tggacagagg ctggcccagg ggcacctggc 1980 ttcctgtgac ctccgggaga ctccatgctg ggcaaggcag agtggccctt cccctggcag

gcgggggcat gaggctgcca cggggaacac aggtttcctt gcacctggcc ccttaccctg 2100 teagetttge tgtttteatg tgetetgaeg eceteceatt aggtgeatee aagetgeaat 2160 gcccacttcc tcctggcagg ggggacccgc aggcaccttc tgctcagagg tgcacttgtc 2220 tggtggccct gctccttcct ggtactgttg acctttctgt gtgtttgttt taaatctctt 2280 gcatggtaaa tagctgcatt ttgttactga taagagtgag tttaaatcca ctgtcatatc 2340 ttttgcgtct ttgttacaca ttttgttttt taaaaatctt ctttcttgtc cttttttaga 2400 ttgacagtgt ccctcttacc tcactttctc cactcagttt gtaatcctgc agtctgttgc 2460 ttttctttta gcgtttgccc taaaggtggc tgcatgtgtc ctcactgaag tccagcatgg 2520 gccccaaatg caggctgagg tctgggtctg gctgggctgc tgggcgcccg agtcatcatg 2580 accattgttc ctgggcacag ccggcgttga cttgtatttc ctccgtgatt accgcctggc 2640 tcatcaatca ctgttttcgt tttccgtgga ggcgtggctc acacaaaggg caagcacgga 2700 gtcactgggt cctgcaggac tttccaggtc aaggcagagg aggtgtccgg tccccagcag 2760 gctcctgtgt gcccctcagt cccctagagg gtcacggcca cctgaccgcc accactagag 2820 gttttggcga ttgtgctgtg tggtgggtct tcccggcctc tgcttagcac agcagtgctg 2880 ctgcccatcc ttcctccttg ccaggtagtg ccgggtgctg ctgcccatcc ttcctctgcc 2940 gggcagtgcc gggtgctgct gcccatcctt tctccttgcc gggtagtgcc gggtgctgct 3000 gcccatcctt tctccttgcc ggacagtgct gggtgccgtg tgggctgcac tgtgtgtgtg 3060 tttctaggtg atggacattc agattgtttt ttggtttggg gctgctgggg atggcgatgc tttgaatgtt cctgggagtg tctgttggtg ggtagagcat gcatttctct ttcgtgtgta 3120 3180 tataggagtg gaatcaaggc cgggcactgt ggctcatacc tgtaatccca gcagtgtggg 3240 aggctgaggc aggaggatta cctgaggtca gaagtttgcg accagcctgg ccaacatggc 3300 aaaaccccgt ctctactgaa aatataaaaa ttggccaggc atggccaggc gcagtggctc 3360 acccctgtaa tcccagcact ttgggaggct gaggtgggtg gatcacgagg tcaggagatc 3420 gagaccatcc tggctaacat ggtaaaaccc cgtctctact aaaaatataa aaaattagcc 3480 aggcgaggtg gcaggcgcct gtagtcccag ctactcggga ggctgaggca ggagaatggt gtgaacccag gaggcggagc ttgcagtgag ttgagattgc accactgcac tccagcctgg 3540 3564 gcgacagagc aagaactctg tctc

<210> 151

<211> 3880

<212> DNA

<213> Homo sapiens

<400> 151

60 gaggagtcag acaccgacgt ggaagaggat ggaggctatg acagcgatgt tgctagagaa 120 aaggccattg actacaccac caagatttat gctgtgagca tcagggaaat ggaaggcacc 180 aagccacacc agcagctgaa ggaagtttcc gtggaagaaa gggaattgtc aagggatcaa 240 gaccacccgt tagccgagca gctccccagc ctgagaaact gcagaagaac aatatcacca 300 aaaaaaagaa actggttgag gagctggctc tagaccacgt gtttggctac agaggtttcg 360 actgtcgaaa taacctgcat taccttaatg atggcgctga catcatcttc cacacagcag 420 cggctggcat cgttcagaac ctctccacag ggagccagag cttctatctg gagcacacag 480 atgacatect etgteteaca gtgaaceage acceeaagta eagaaaegtg gtggeeacea 540 gccagatagg gacaacacct tccatccaca tatgggacgc catgaccaaa cacacctct 600 ccatgctgcg gtgcttccac tccaaggggg tgaattacat caacttcagt gcaactggaa 660 ageteetggt gteggtggga gtggaeeetg ageaeaceat eaetgtetgg egatggeagg 720 aaggtgccaa ggttgccagc cgagggggtc acctggagcg catatttgtg gtggaatttc gccccgactc agacacgcag tttgtatctg tcggggtcaa acatatgaag ttctggaccc 780 840 tggcaggcag cgccttgctt tacaagaaag gggtcatcgg gtccctggga gctgccaaaa 900 tgcagacgat gctctccgtg gccttcggtg ctaacaatct cactttcacg ggtgccatca 960 atggagatgt ctacgtctgg aaggaccact tcctcatccg gctggtggcc aaggctcaca 1020 caggeccegt gttcacaatg tacacaacce ttcgggatgg actcatagtg accggcggaa 1080 aagagcggcc gaccaaagaa ggaggtgctg taaaatctta gtgggaacca aagacggaga 1140 aataattgaa gttggtgaaa aaaatgctgc ttctaacatc ctgattgatg gtcacatgga 1200 aggggagatc tggggcctgg ccactcaccc ttccaaggac ctcttcatct ctgccagcaa 1260 cgatggcaca gcccggatct gggacctggc tgacaagaag ctgttaaaca aggtgagctt 1320 gggccatgcg gccaggtgtg cagcctacag ccctgatggg gagatggtgg ccattggcat 1380 gaagaatgga gagtttgtca tcttgttggt gaacagcctg aaagtttggg ggaaaaaacg

1440 agaccggaaa tctgctatcc aagatatcag aatcagccca gacaaccgat tcttagccgt 1500 tggttcttct gaacacacag ttgacttcta tgacctcact cagggcacaa atctgaaccg 1560 cattggctac tgcaaagata tcccaagctt tgtcattcag atggattttt ctgcggatgg 1620 caaatacatt caggtgtcaa caggtgccta taagcgccag gtgcatgagg tccccctggg 1680 gaagcaggta actgaagccg tggtcattga gaagatcacc tgggcctcct ggacaagcgt 1740 cctgggagat gaagtcattg gaatctggcc acgaaatgca gacaaggccg atgtcaactg 1800 cgcatgtgtg acccacgctg gcctgaacat tgtcacagga gatgactttg ggctggtgaa 1860 gctctttgat tttccatgca cagaaaaatt tgccaaacat aagcgatact tcggtcactc 1920 ggctcacgtg acgaacatcc gtttctctta tgatgacaag tatgtggtca gcactggagg 1980 agacgactgc agtgtatttg tgtggcgatg tctgtaaaat gccagaagcc tcttatgtta 2040 ttgctgctgc tgctaccagc cagcaactgc agaggccatg ctgaggtgcc tccttgccac cagccgttgg gaaatgccta ccatgctgcc ccggatgcac aagctcaaaa cgctgcagaa 2100 2160 gttacacaac tgctcccata atctggactc tccaaaaccg tgatgccacg aaggaaggtc 2220 aagttttaaa atgttaaaga ctgcttgcct ctgttcctga gactaaacag tatacatact 2280 aactacattg acaaagaaat cctatctgat aatgtagccc gctgacgaat tttgaagcct 2340 cggttaccct aaccaatatg tagcttttaa tttgcatcaa aacttttaca aagatgtttt 2400 gctattgttt ctatatactt caagaatgtt catttttaca aataagttga acaagacagc 2460 ctaagttaga tgcaccgaag tactagaaat atcgctagcc tctgttctcc agtttagctt 2520 tcaaaaccaa atgagccatg tataaaggag ttgagaaact taatttttaa atgtttcatt 2580 tgcagagttt tatatccatt aagtgccttt gaaagtttcc agttgtgtgg gctgctgtct 2640 cacctcccac caatttctcc tttctccata tggtgctaaa acctcaaagc tgaggagggc 2700 tgcaggaccc ttagcagatt cagtgtgtca cccttgtcct gtgttcacgc caaggcttcc 2760 taaatgaaag acatcggtta cctgcttatg ggaaggtgag cagcaaagga attgaagttc 2820 gggacagggt agaattatgg gttttcattg tgtttcatgc caaacccaca aaatccaaaa 2880 tagaattcaa gttaaacaaa cttctactac aaaatggaag gggaaaaaagg ctcaggaagg 2940 tctatgagaa tgagctgact tatctcgtta aatcttaaga taaatgaggg taacccaagg ctgcaccttg gtgtaccacc ctgagtggag ttgaggtgac ttcatttgat tgcttcaggc 3000 gaactatata ggtcaagtcc agattataaa aaaattatct gcagaacaaa ttgtaaaccc 3060 aaggaatagc tggtaaatca aaattataaa gtgagttaga gttccttgga tttggttgta 3120

tgacagaata	tgacttggac	aatctttacc	agaagccatc	cgtaagcccc	tcagtcacac	3180
tttccatgta	gctgaccagt	gactacagga	tgtggctgac	agtgctcact	gaaaggagag	3240
ttggtgcggg	actggtggtt	ctgagcacat	agacgcctat	tagtccttct	ggtcagtgaa	3300
cgaaaattct	agacctacag	ttactggcta	cttgcatttg	tcagtttaga	gaaaaggtaa	3360
aatgaggcat	tttcaattgt	agaatacact	aacatttacc	acagaagtgc	ttcagcattc	3420
taaatggatt	agatcactca	ttaagctatt	tttatatgcc	aatttactaa	tgccttacat	3480
caatccacta	ataggttgtt	gggcccgcag	tagagtccct	atgcagtccc	aattctgttt	3540
tctgtaacca	tgtgactggt	gatgcagagt	gataaccatg	tctgcctatc	ttgtactaga	3600
ctcttcatgc	tgatcggatc	ttgcattgaa	ataaccatgt	ggaagaacaa	tgaatcgatt	3660
aatgatgaca	tgtacaacca	tatttaaaga	gcaatagtgt	ccgtgtgtca	tgaaaaactt	3720
atttgtaaac	gtttatatgg	tatgattttg	attttatgta	tgttcataaa	tcctgcactg	3780
tatgatatat	gtgggttaaa	acattggtgc	atgaatttat	tttcaaagta	taaaacacat	3840
cacttaaaca	ttttatgtgt	caaataaaat	ttgattatgt			3880

<211> 3227

<212> DNA

<213> Homo sapiens

<400> 152

aggaaatgag	ccatgggtga	gcaagcatta	ccacctgagc	tccgccttct	gtcagatcac	60
tgggggcatt	agattctcac	tggagcacaa	accctgttgt	gaactgtgca	tgtaagggat	120
ctagtttgca	tgctccttat	aaggagcata	tatctaatgc	ccgatctgtc	actgtctccc	180
atcacctcca	gatgggactg	tctagttgca	ggaaaacaag	ctcagggctc	ccaactgatt	240
ctacgttatg	gtgagttgta	taattacttc	attatatatt	acaatgtaat	aataatagaa	300
ataaagtgtg	caataaatgt	catgtgcttg	aatcatcctg	aaaccatctc	ccgtttctcc	360
tgcctggtcc	gtggaaaaag	tgtcttccat	gaaaccggtc	cctggtgcca	aaaaggttgg	420
ggaccactgc	cctaacagat	ggaaaaggcc	tagaagccag	gtccctgcag	cactctcccc	480

540 tggcctccca ttggactttc tagaggtcag agtacagagc gcattcccta acaaggagcc 600 catggcaggt ggcctctcct gggattacct gtctcctgtg taaggatgag ggcagttaca 660 ggaageteet ttgggggaga ggatgeaagt teeacettee aggeagggtg caaaagtaca 720 gttctccctt ccttgttcac agtgcttccc agagaactgt gggggacatt tgcagacata 780 gcctaggaga aaaagaaggg aggtgagaga ccgcactggc ctagcagtta aaggagacct 840 ggcattggca gtctggtgtg tttgtgcagc cgttcagtta ccatttattt atttggttgc 900 teceetetgt geceaatace gtgetgggea ttggtgeet getgaaceaa gageaetttg 960 gtccctgccc tcaaacagct tacagcccac cagagacaac agtcacctaa agaacagtaa 1020 taaacaggat aacaaccata gacactaact tagtgctagt cactgttcca aggatcttcc 1080 tgtgttggct catttgatcc tcacgatgac cctgaggttg gtgactgtca tcatcctcat 1140 caggggacag gtacaaaggg atggcagatg aggaaaggag gcacagagaa tggacagaat 1200 ttgctcaagc cagtaaatgg caaagctggg gttcaaacct agacagctag ctataatatc 1260 agtatctcag taattataat aaaattagtt ttattgaagg gaaatgctgg gaggggtggg 1320 ggatgaggct agcttactct agggatctgg gagctatttc atttgagatc tgaaggatga 1380 gtagaaatta gctaggcaag aagctagagg gcaaagagaa aggtgtttca ggcggaagag 1440 aagagtgtgt gcaaaggcta gggaagggtg tggcatggtc aaggaactca aaccacca gggtgggcca gcctggtgag ggacagggag agtttgaact atggcctggg aggtgcagga 1500 1560 gccacatgca gggattggga ctctatccta gcagcatggc ggccactgag cagttctcag cagaagagtg ccatgcacag gtctgtgctg gataaagatc accccggctc ctgctggaag 1620 1680 gtggaaggcc gggatagaag ctggagaaca gggaggaggc tggtgccagg gtgagaggtg 1740 atgggggctt gggacagagg gacagcaatg gggaaagaga gaagtgatgg attccttgga 1800 tattttgcag gtagaaatga catgattagc cagacaaaaa tcagaaaaag gggtaatgcg 1860 aagtgttgac aggcatgtca catgttgaca ggcatgcggg tacataggaa cctctcatgt 1920 tgtgtgtgat gtatagaata gatggctgag aggcatgtgg gtacacagga acctctcatg 1980 ttgcatgtga tgtatagaat agccatgctg agagcaatgt atccctattt agtcaaaata 2040 attatttgca tactgtgagc ctgtgacttc cacccctggg tgtcgggtgt gtgtgtgta 2100 aggaaactct cacacagctt cacaaggaga catataggag aatgctccct gcagcattga 2160 tgatggagat gggtgtttgg agtgcgaggg tggagaggga aaatgtgagt gcgtgtacat 2220 catggagtac tgagccacag ttagaagcaa ttaatgagaa ttgctcatgg cagcattgac

agatcttaaa	aatatggtgc	tgagcgaaag	cgtaaacaac	atataccact	tatataaatt	2280
ggaaattcaa	gcatatgaaa	aacaacatgt	attttgcaag	aactcattca	aaaactgtaa	2340
atgtttgcct	ctagtgttag	ggaaggggaa	gggagtggaa	tataagttaa	aggggaatga	2400
gaaggagact	gtgcatagac	cagtgatgac	actaaggtat	gtgattaatt	caaccctctg	2460
ccctgaggt	ccccattcat	atcctccctc	atcccccag	aagtagaaag	atagtttttg	2520
ttgagaggga	aggaagactc	ctggcttccc	ctagtctaga	tattgcagat	tccaacctgt	2580
tactcacaag	ttaggggaag	agagagaaat	ttggaaccag	gaggctctga	gatctccacc	2640
ctgacatgcc	tttcccacct	gaagagcctt	ctgggataaa	ccctgggttc	agcctggcac	2700
cccagccctc	acctgccccg	tgggtccatg	agcacttccc	accattgagg	catgtgttct	2760
ggctgcagta	gtcactgtgg	aggcagcact	gggtgagggc	ttgtgtctcc	agcaagcctg	2820
ccaccgtctt	gccaggggcc	agcagatcta	gagcctcttc	gttgaccacg	acagcatcca	2880
ggcagccttc	aaagccctgg	gagacattcg	aggaagaatg	caacagaatg	aggccgccca	2940
gcaagaggtg	cctttcgggc	ctcagaccac	ggcagttctc	tgggaccaca	agggaggtgt	3000
tgcccatgct	gtcaaccatc	aggcgaatgg	aagcgtccat	ctcctccacc	aggatggagt	3060
gccactcgtg	gtcattcaca	tggcgctggg	aggaaaggtt	tccatagaaa	ccacccagac	3120
agtggtattc	cagctggggc	actccactgg	ccagctgcaa	aggaaatcca	aacagccatc	3180
agcaaagcca	aggagtcctt	gtaaacctgc	taagaggctg	ccagttc		3227

<211> 4342

<212> DNA

<213> Homo sapiens

<400> 153

gactccgtcc	tggctcacgg	accgcagcgc	agccggcacc	cagccgcctc	tccctttcct	60
ccgcacacgg	gcagccgcgg	tccaccgtag	ggcagtcgtc	gttggcatcg	cgcgtaatca	120
tcggccggcc	tcctccagtg	tctcccagcc	ctggcggaca	gcccgggtcc	cagcctagga	180
cccaggagga	tgggtgttcc	gcgcagcttc	cggggctctc	cccgagtccc	acccccggc	240

300 ccgcccgat ggacttctct tcgcccactc ccatccctag accacatctc ggcccccaca 360 gttcctgaca tccttgcgct tcacgcaaca tcgcggccca tgatcatgcc ccaattcccc 420 tcacctctaa ggcagccttc tccttgccgc ctcccgcctt ccgagcgtgt gcaactccaa 480 ttgtcccgg gctccttcc agcctcagga ccccatctca caccegcctc tcgcttccg 540 cttcccgctc gcctgaaccc cgccgcctct gctccctgtc ttgttccctc agcgtggccc 600 cttcctccag ccgcgggaag tgggagacgc tagcgggagc ttcctcctcc cggcgctcgg 660 aggaaaagga aagaccaagt agaaagggtc gccgctgcgg cacgcgaggg agctagtcgc 720 egggeteege geteegett gegteetee ageeeetgg geetegteeg gggeeggate 780 ttctcgggca ccgcctggtg cgaggagtca ggactgcgac ctcaccgacc tcctcccatc 840 cccagcctgg gattgggtgg gatatctggg atctctgagc ttgggtgtca aaaaaatatt 900 gggggtggca tttatagtca ctatcgtccc tagcttgagg gaggcgacgg ctgccttccg 960 ctcgccgccc cccggttttc ccggctccga ccctatcctc taacccgttt cctgcttcag 1020 ctgaccacat tgttttcctg gatgtgtccc gtgccgagca ggctttttcc tgcagatttg 1080 cccccccc catcaacatt ttgctgccaa gagaagctag taaccaaaaa caaaacaact 1140 gggaggaggg gcgggagagg aagaaaagtt gtgccctggt ggcttatccc tccccggctt tgatcccctt tgatgtacag ggaggtgccc cggccggggg tctggggcca cgtcgggggc 1200 taggtcggga gggctccctc gggctggccg ctgcccagcg ctggcggggc tcaggaggcc 1260 1320 geogaggtge egeagteece geetggtgee eegegtteet geagteeceg eeeggageee gcgcaggcgg ctgctccaaa gtgttttctt tcagccttaa aatccggagg gagcttcctt 1380 1440 cctcccacc tcgtagcgcc aggctctgcg ggcggggaga cgttaagcgg acaggaatgg 1500 gcccagggcg ggctcggaac gacgtcccct accccaccc cgccgcgatt aggatctgcg 1560 ctctggctga tcgcccctc cccttttcc tgcatttaca ggcaagtgaa ccggagcaaa 1620 cgacttccga tccagtctgc gctgttgcgg ctcccgtttg ggatttgatt tgcagcatct 1680 ttgagcctct acgacaaaaa accgcgaagc acgcccagcc ctcccccggc accccgaaaa 1740 gcacccactc cctcccgggg acacagctgg gcgcgtccac acccccgcag ccccacacca 1800 tgttgtgcgg aaggacttcc actccccgcc tgtgtcgttg atgtcagacc ccaggccagc 1860 ctccgggcgc tgcagttctc ccggctaatg ctgaggctgc ggctccggct ctagcacagg 1920 caccageege egeegeacee ggeeceageg eceaeegtet geatgtgeee geegtageeg 1980 tctgcccagc ccgcagcccg cgctccacgg agcgctggag accaccgtgg ggggcccctt

2040 ctgccctcga gagaagcggt cttggaggta ttgatttagg tggttggatt ttttccgtgg 2100 atctatcaat tcacaattcg aatttggaag aaagaaggaa aacatgacgt ctccagccaa 2160 attcaaaaag gataaggaga tcatagcaga gtacgatact caggtcaaag gtaagggctt 2220 tgaaaaatag cacactgcaa atgctctgtg gactggtgag gcgtgtattt ccaccgtgat 2280 ttgcaggttg ttcatttctt tgggtggagc agatgggggc aggctgaccc cagaggtggt 2340 ttcatagatg ggtctgaacc tccaaaggat gggcaatgcc agggggccat tgacactgga 2400 aaggaatttt tgcagtgggc tgtaggagta tctttgtggg gctgaccatg attttggcag 2460 ccctttcccc cccaagccgg acagggtggg gggaggggca ggaggctctt agagaaaggc 2520 agtttgcctc cggttctctg ggtcaggttt ccttgaaaga caactgaaat ctgacaggtg 2580 tttggacatt tgtttcagag attgaagagg agtccagaca gaaaggcaac cttgggaagg 2640 tgtaccattt ggagagcctt gggagaggcg gggtttttcg gatgcactat attaaaacat 2700 gagatttgca atggcattgg caccaaaagt ccattgccac cttgggtgta ccttgtacct 2760 gcctggtctc tggtcggcct gcatacaaac agagatcaga gaataaggcc acccacgccc 2820 ggtctccgcc ctcacctaaa tctgaataga gttgggagga tgttagggta gccggttggt 2880 gctgattctg gaaaatggga agacataatt gtttaaccct tctgtgctgt ggccctctgc 2940 teeggaagae atgettttaa ageeeeattt eeeteteetg aaaaatgtga agggtaaage 3000 3060 catgaataag agcccttact cagatagcgt tttttaaacc agcagttccc ataggaaggg 3120 ttcctgcctg ttaaagagct gcagcatgtg tttgtgcaag gcactgtccc ttcctggtca 3180 gtcactggaa agagccatgt ggctccagcc cattgagacc ttagctgggg agtggaagag 3240 gtgggtggcc ttgaatgtta caccacatgg ttggagctct gggttttcct ttgtttcaga 3300 gtacagaggg aggggcccct cctttccctg caccagtgca aggagacctt ttcctatcag 3360 agaggacttg ggaagggcca tggctcccct ctaatgattg ctggggggtg ggggtaggtg 3420 tagagtttga aatgggcagc tcccttatct cttggaaggt tggaaggtag tctgaagtcc 3480 tcattgtacc tacaggatct tttttatgtc attagtttgg tcagtgctgg aggtgcccta 3540 aggggccttc tatccacttg gctgcaaata ttggtaggtt tattacagag atgggggagt 3600 tgactgattg atagcttcag ttgaactggg attgagagag gtgtggttgt gagttattat 3660 tgaggtcttg gcctcttgtc actgttcata atccaggctt gtttttgtaa acaataggcc 3720 actggcctcc atgtcctgtc cagatgcatt gcatttgctc ttggaatccc ccctgcagtt

3780 ttaaccagat atgtcttttt ttttttttt ttttaacaca tcctattctt aaactgttgc 3840 catcgggagt gttaataact ttgatcttcc cagatttctc tccagaagca cgccatttga 3900 ctaaggtgca aagtgacttt aaatgtttaa tttttggaag gttcaaggct gataggtgtt 3960 aatagaacca tatctgccaa ttttttattg gcaaaggatt tctcaagagt gtctcaaaat 4020 taaacacttt ggatatttac aaacattgct cattgagatg atgtaacgca gtcggctatt 4080 tgggttctct cttcaacctt gccacaaaca gactattttg ctttgctctg atattttccc 4140 attgatacta ttcaggatca tagaatttta taggtggctg agcatgatgt cttactccga 4200 gaaggtgcct gatgaatgct tatggaactg atttgaatag tttagtcctt cattttacag ctgaggagaa tacagagaac tgaagaggct tgtccaaggt cacacggcca gatggtggca 4260 4320 gatctgaaac tagaagcaga tttaccaact ctcaattctc tattctgtat ctttactatg 4342 aaacatcatc tgaccagggt gg

<210> 154

<211> 4321

<212> DNA

<213> Homo sapiens

<400> 154

60 gcagagegge tggggeggeg gegeggetee eggtgeteee eeeggegege geeeegagte 120 ggtgagggcc cggctctgcg gccccggag ccatgggctg catcggctcc cggactgtgg 180 ggaatgaggt gattgcagtg gattggaagg gcctgaagga tgtcgatcaa atcaacatgg 240 acagcaccag ctcactgcac gggagcagcc tccatcggcc atcgactgag caaactcgaa 300 ctgatttctc ctgggacggc atcaacctct ccatggagga caccacttcc attcttccga 360 agcttaagcg aaactctaac gcctatggca ttggggccct ggccaagtca tcattctcag 420 ggatctcacg gagcatgaag gaccatgtga caaagcccac agccatgggg caaggccggg 480 tggcccacat gattgagtgg cagggctggg ggaagacacc agctgttcag ccacaacaca 540 gccatgagtc cgtgcgcagg gatacggatg cctactccga cctcagcgat ggcgagaagg 600 aggeaegttt tetageggge gteatggage agtttgetat etetgaggee acaeteatgg

660 cctggtcttc catggatggt gaggacatga gtgtgaactc cacccaggag ccattgggct 720 gcaactacag tgacaactac caggaactga tggacagtca ggatgccctg gctcaagcac 780 ccatggatgg cctcactctt acgtgtccca gggtatgtac tgtctggggt cgtcagatgc 840 ctgggaagcc agcgatcagt ccctcattgc ctctccggcc acaggatcct atcttgggcc 900 tgcatttgat gactcacaac ccagcttgca tgaaatggga ccttcccaac cagcttcagg 960 atactetget etggageete eatetttget ggggggagae aetgaetggg eteegggggt 1020 aggcgcagtg gacctggcaa ggggccctgc tgaggaggag aagaggccat tggcacctga 1080 ggaggaagag gatgcgggat gccgggacct ggagtcactt tccccacgag aagaccctga 1140 gatgtctacc gctctcagcc ggaaggtgtc tgacgtcaca tcctcaggtg tgcagtcctt 1200 tgatgaggag gaaggcgagg ccaacaacta gtttcctccc ccaatgccct gccttccact 1260 cccacctgag ggccatggct gtgacccata ccctcctcc ccccagcagt acagctgaaa 1320 ctgggcagac aacattgggg aacccaggag cttccagtcc tctcctggaa atggaggacc 1380 aggatgggat tttatccagg cttacactct agaaacccac aggcctggga actgagacct 1440 gggcaactag atggccgtga gcttggtgtg gctgtggaga aggacctggg ctgtgggctt 1500 ctgggtctgt gccgacaaag cctccagtgt gtgcaccctg aggacggggg cagcgcagct 1560 gtgctcagga ctggatctca gttcttcacg ccccgatttc gtcttccagg agccgtaact 1620 ctgctgtctg aatgcctcct ttctccattt cactcttgct tttcccaact ctgttttctc 1680 tggctgtggc cccagctcat ccctactgag agaacagacc tcaggggctg ttggacatgg ctggacaggc gcaagggggg gctgcctgaa gggcacgtcc atggggaggg tggagaggct 1740 1800 gcctcagcag gtcatttggc ttctgagatc aggagtcgag gaggaggtgg atgtggcagc 1860 tgagatctac agggggcacg gatgtggttc tttctatcaa ggcctgcccg gagacaagag 1920 agtcactgag gagactaaga acaaacacag ccccttgctc tgggatcttt aatatcccat 1980 ggctaaaagg aagatcctaa gggtctggga aaagacccag ccagggctgg ctgctccagc 2040 tettgettee ettteagett tetteeatee etgeteeggg ageetgagga gggtgtgggg 2100 acacccatct tggatacacc aacgcaggat gcaggtgtcg ccaacagcag ggggagcatg 2160 agggctgtct ccccttattc acccctgtcc tctgaagctg tttacacttt tctctttgcc 2220 2280 cggtgctgtc actccctcag ccaggcaggg ttgcagctga gggccagggt gggcactcgg 2340 cactttctgc cccttcttca gctcctccca ggactcccaa acagcctcac agctgtcctc

cctgcctccc caggcctcct accagaggaa gagaggaaaa tcagcggatt cttccttcca 2460 ggatggtgta tggtgaggca caagcttgcc ctcccacact tggcatccat gctggtgggg 2520 actgagcagc atatgcgccc cagcactacc gtgagagcac aggcagagga tgggcggagc 2580 aaagcagcgg tgctgtgggg ttggagagca cttggccctg ccactgccca ggtagcccct 2640 ccccagccct tggcacaggc agagttcggg taggagagag aggcctaaga ggctcactgc 2700 cctatctcct tctttcctca cgcccttcca aggctccggc tcccaggcct gtgtcctacc 2760 cacactetgt caggagteet accaettgea teetetgetg gaagggagea etgttgteet 2820 ctcctggccc tgggcacaaa ctttgccctc acccccaggc cccagaactt attattttgg agtgagaagg ttgagagttg gggtgtttct gtccatctat ggtcctgtcc cgccatcaag 2880 2940 ttcatactct cttactcaca cttctgggat gcaagcaggg cagggggttc tgtgtcttcc 3000 atggaagggg gacaatggtt atcctgaggt tggtttttgg aggaaacatg ggcgtaggca 3060 aggtgaacca aggcaggtgc agtcacctaa ccgaatgctg cctgtacagg ggaagagtcc 3120 tettgtgett getaaegtgt getgaeteea tgteeeagga ceteatttee aggagetetg 3180 agaggtggtc tagcatgccc gccctggcag ctattcccca cccgtctcct gctgcaggct 3240 ctggggtttt gcatgttcat gtgaccttcc ttccatgggg tccctggttc ctcaccttct 3300 ccaatgtgtg ctattcccac atcacctctt cctgtcgtct catcctctca gtgcccatat cataccecca gaccaeggtg gacageteae ctagtgagtg egtteattea ttacagtteg 3360 3420 tttttgctca ggcccggggg agttaggaaa ggtagaccac agcagctttc gttcctcctt ccctttccca aggaagccaa atggtccctg acaaaagatg actaaagatc tgaaggactc 3480 3540 tagcagggtt catacatgaa cctgctttcc ccagggtgct ggcatattgc tgcagatgga 3600 agtcaggtgg gggtctgtct tctgcaagga gctcctactc gctctgaaga gggagactga 3660 ggagctggcc tgggaccatc ttaggactct tctggtgctg ggggcagggt gcatggggt 3720 tgcttatcgt ctatttcagg gggtggggag gggcatgtgc aggaagaggc tgtttcgggg 3780 tgggaaaggg ttgcttttcc tttggggtta aggctgtgca gcacgtttta cagcagtcct 3840 ggaacagggc tgtttttata ttcttgtgaa tgaaactgct cttgctaaat gattttcttt 3900 ttttggaggg ggggtgcact ttcattttca attgacttta ttaaatgaaa atccaaatct 3960 tecactecte ecectecatt gteceeteec ecaceacaea cetteettet tgteettgtg 4020 ttgaagaggg tatcttggag aatgagttta ttatcttctc cacgacctca cctatacatc 4080 ccacacacca tectecaggt etgggaaata tecattttte tggecagtet tageatgttt

tcttaatgtc acattcccac gccaggccca agagagattc tatgacatat attatagaga 4140 gaattctata tcaatatata taaatattag agattatgta cacaagggca tgggctcaaa 4200 tgcccactgc cagtcccca cccaggcttc agcatctctc ttggcctggg gaagtgggag 4260 ggatgtgatg ctggagaagg ctacaggctg tgttcaatga cactaaacag aatgtggtgg 4320 c

<210> 155

<211> 3600

<212> DNA

<213> Homo sapiens

<400> 155

60 tttttacctg cccaacaatg ttccatctac catctaaaag gtaatataag aagaagtttt 120 gaaacccact ttaggaaaac catcttcttt aaatccttca attatctgag gcctctatat 180 gtcaaaacta tttttcagtt gcaggggatt gggcaaactt gttctttctt atacttgggt 240 300 tcaactgcca agcacacttt attttgcata ggagtatgca gcctagggaa ccttggttga aaagcagcag tetgetatge aaaatattgg aaatcactga cagtgtagca tteatattat 360 420 ctgtcaatga gggtatattg ggaacgtgct ctcgtgaata ataaaaagca acatattttt 480 atttggcctt ataaattggg ttgtggtaat gtaaactttg atatatagtc tttttatttt 540 tctcttatta atctgccaaa gatgggaaca gatacaagaa tttttcaaat tggcttttgt aagacagttg atgattgtaa tagtgtttaa tcttccagaa agctttatat gttgttccac 600 660 aataaaattg atatttgttt cagcaaagtt ttcctgacac tcacaaaccc acaaactgtt 720 cctcttaatg cagatattgt agaatctaca aagttcaaat ccatttttga tccaaagaaa 780 gtagaggagt atttgagaca tgagtgtacc cagccctttt tttaatcaca ggcaatgcat 840 gggtctggct ggttacactt tgccaagaag acttgtctta tgaaacccaa ggtatatttt 900 gttatgccat tttatgtcct tttcttttaa cattgtggaa agtggtatgt tgaatcaagt 960 gtaagctgag ttttccagac aactgaagta gctacatcat gaatgttatt ttgttattaa

1020 agggttttta ctcagtgctt tgtgccaatg gatgtccttt tccttggaga cacataacta 1080 caaaattacc tcagcttggc ctggttttct ctcctgccct cttggggaaa catgggcctg 1140 gcctgggaaa aggcaggtca tgggctggaa ggtaggtttt ggtactagga agaaatctct 1200 gtatctgtca gctttaaaga gaactgggcc aaaaatctct aacctcactc tccagctgga 1260 ctccaacact tccctgcaat cctttggtct tgagcatgtg ccagcatgaa ggcagactcc 1320 agttcataca tgaaaggcaa gaaaaagaaa atagtaacct tgaatcttct gtgggccacc 1380 aggeacteae ettteeceae ettgeacaet atceagteaa ggetgttgea geceatetgg tggctttaca tgggacatta ccaaaggctt cttcctccat cctggggttg caaaggatcc 1440 1500 aggtccctc catccagtgg ggctcttcca catcagaagt ccccctccca ccatcctctg 1560 catcctgttt agctatccca tctatacctt ttggagatga ttatttagaa aacaaagaaa 1620 ggtatggaat ggggtttcct attgtttgct aggttatatt ttagcaattc tcaattcttt 1680 gatctggaaa aatacaagag ggaaaaggag accccactat ctccctgtgc tttgctccca 1740 tctcaggggg caggggcagt gcacattgcc tatgctgttg atctgtcttg ggcgacaggc 1800 tgaatcacag ctattgcccc agccaaaaac atggcccatc aatgcctact ttatctctgc ttgaaaatcc tattcaaaaa gttgtagagt ttgaggtttt tatcccccca tatcctttgc 1860 1920 tttggtccag tttggccttt agcataagag tcagctttat ctctaggaaa gttttttcag attatgacaa ggaacctgcc acctgggaag aaaagagtcc gaagactatc tagcaatcgg 1980 ataggtagtc ataccattaa cagatacttc cttgaaggta gaatattatt tcctttcttt 2040 acagttttgt gttacacaag tccaagtggt gccagcaaac ttcttaccgt gaaatgttgt 2100 2160 aaaacacctg gcatactgaa atttctgaaa caaaaacaca agctccacat tgataacttg 2220 ataaataacc actaaagttt agatgcaggg actgagatga tacaggcaaa atcttggtgt 2280 tggtttctct tttaattcgt atcttcgatc acctaacctt tctcaatcca agagcagttc 2340 agtettttet eeccaagtet aggatgeeaa agageateat aggaaaagat aattagggat 2400 tgaccagcat ttcaattagt tctcttcttc atctttgcat ttctcaaaag tgttctcctg gaccagagag aaagagctgg tccattttt ttcattcttt ctattcaaat ttttccaccc 2460 2520 agacaatact ttattaacac agatactgta gatccttcct tggtcagtga attattacaa 2580 gaggagctat ccttccacca aagtgagtga aaacaagttc cagtatcttt tcttccatcc 2640 agttttgttc tcagaatcca agtcagtcct gggtcttttc tcactttaga ccctggcctc 2700 agatgtgttt attcttgcta tttaaaaata cctttaaatt tcacatgctg gcctgcagaa

2760 cttgcatcct ttgttctata ctgttgactg cttgatggta ttgaaaggtg actataatga 2820 gggaagaaag gaggaggtaa agagagaaga atttgtccca gatctgttta aagtttcaaa 2880 atttaaaaag ggacccatta aattatggga aaatggctat agagtgtgag cctccgttga 2940 ccatatgctc aaagaccgta ctctgccacc tgccttccag gtagctattc tagaaactca 3000 gtcctttgtg gaaacccaac taccttttaa aagtctcttt ccagattcca aaaggacaag 3060 agatcagaga gtcacatata cacctcttgt tttattttct tgctttcacg ggtattattg 3120 cctctcatgt ttaaaatcag gaaaacacac ccctaaaatt tgcactctct tccgttttga 3180 aaaagaaaac ccacacacaa atgcacacta ttaccgtctt tcaccctgcg ctatatttcc 3240 3300 aaagtgtatt ataatccaga tattgcccca tctcaaacat gttaagtcag actgtgctga 3360 aagactttcc agggacggtc aacagggtat atgttcagtg gctgccctga aatcctggtg 3420 gggatgagga tcacgcttca tcatcaaggg gatgcccatc ccctgataag ctcccagtcc 3480 ttttggaaga tttctttgaa tgttaattgc attttcagtt ttgctcattt cccacccaa 3540 tgttttgtct gcaacatcgc ttacactgga ttctttctat ttttattcct atcattaaat 3600 ggtagtgctg taaattctgc attctgcaat taatgttaaa taaactgctt taattcattg

<210> 156

<211> 4607

<212> DNA

<213> Homo sapiens

<400> 156

gtgcatgagt cgccactgag agcacgggcc agaggatgga gaagcagcgg gcactcgtgg 60 ccgccaagga tggggatgtg gcgacgttgg agcggctgct ggaggctggc gccctgggcc 120 cgggcatcac cgatgctctg ggggccggcc tggttcacca cgccacccgg gctggccacc 180 tggactgcgt caagttcttg gtgcagcggg cccagctgcc cggcaaccag cgggccaca 240 acggggccac cccagcgcat gacgccgtg ccacgggag cctggccag ctgtgctggc 300 tggtccgca ggggggctgc ggtctgcagg accaagatgc ctcgggcgtc tccccgctgc 360

420 acctggccgc ccgttttgga cacccagtgc tggtggagtg gctgctccac gagggccact 480 eggecaeget agagaecegg gagggagece ggeegetgea eeaegetgee gteagtgggg 540 acctgacctg cctcaagctc ctgacagccg cgcatggcag cagcgtgaac cggcggacac 600 gcagtggcgc ctccccactc tacctggcct gccaggaggg ccacctgcac ctggcccagt 660 tectggtgaa ggaetgtgge getgaegtge acettegtge tetegatgge atgagegeee 720 tgcacgctgc cgccgcccgt ggccactact ccctcgtcgt ctggctggtc acattcaccg 780 acateggact caeggeaegg gacaatgagg gggeeaegge cetgeaettt geageeegag 840 geggeeacae geetatteta gaeegaetee tgetgatggg taeeceeate etgagagaet 900 cctggggtgg gaccccctc cacgacgcag cagagaacgg gcagatggag tgctgccaga 960 ccctagtctc ccaccacgtg gacccctccc tgcgggatga agatggttac acggcggcag 1020 acctggcgga gtaccatgga caccgggact gcgcccagta cctgcgggag gtggcccagc 1080 eggtgeecet getgatgaeg ecceaceae caeegtteee eccaceteea etgttggeea 1140 cgaggcgctc cctggaggat ggaagaagag gaggcccagg gccagggaac cccagcccca 1200 tgtccctcag cccggcctgg cctggccatc ctgaccagcc tcttcccagg gagcagatga 1260 ccagccggc ccctccgagg atcatcacca gtgccacggc tgaccccgag gggacagaga 1320 eggegetgge gggggacace teagatggee tggeegeact acagetggat gggetgeeet caggcgacat cgacgggctg gtgcccacgc gggatgagcg cggccagccc atcccagagt 1380 1440 ggaagcggca ggtgatggtg cggaagctgc aggcgcgcct gggcgcagag agctccgcag aggcccagga caatggtggg agctcaggcc ccacggagca ggcggcctgg aggtactcac 1500 1560 agactcatca ggccatcctg gggccctttg gggagctgct gacagaggat gacctggtct 1620 acctggagaa gcagattgca gacctgcagc ttcggcgccg ctgtcaggag tatgagagtg 1680 agctgggccg gttggcggct gagctgcagg ccctgctgcc cgagcccctg gtcagcatca 1740 cggtcaacag ccacttcctg ccccgggcgc ccggactgga ggttgaggag gcctcaatcc 1800 cagcggctga gcccgcaggg tctgcggagg cctcagaggt ggcccccggg gtgcagcccc 1860 tgcccttctg gtgcagccac atctcccgcc tggtacgcag cctgtccctg ctgctgaagg 1920 gcatgcatgg gctagtacag ggggatgaga agccatccac ccggcccctg caggacacct 1980 gcagggaggc ctcggccagc cccctcgga gcgaggccca gcgccagatc caggagtggg 2040 gggtgtctgt gcggacgctg cggggcaact tcgagtcggc ctctggccca ctctgtggct 2100 tcaaccetgg cccetgcgag ccgggggccc agcacaggca gtgcctgagt ggctgctggc

cagccctgcc taagccccgc agtggcctgg cttcagggga gcccaggcct ggcgacacag 2220 aggaggccag cgactctggc atcagctgcg aggaggtgcc accagaggcg ggtgccgcag 2280 ceggcceaga cetggceage etgegeaagg agegeateat catgetette etcagecact 2340 ggaggagatc ggcctacacg ccggccctca agacagcggc ctgcaggacc ctaggagccc 2400 gccacgcggg gttgcggggc caggaggccg ccaggagccc tgggccaccc tccccgccca 2460 gcgagggccc ccggctgggc cacctgtggc agcagcgcag caccatcacc cacctgctag 2520 gcaactggaa ggccatcatg gctcacgtgc ccgcccggca gctgcggcgg ctgagccggc 2580 agccccgcgg ggctttgtcc cccgagcagt ttctgcccca cgtggacggg gctcccgtgc 2640 cctacagcag cctctcactg gatctcttca tgctgggtta cttccagctg ctggagtgcg 2700 acctgccggc ggaggagcgg aagctgcgcc acctgctgtg cttcgaggtc ttcgagcacc 2760 tgggcaccca cggctgggag gctgtgcgcg ccttccacaa ggccgtgacc gacgaggtgg 2820 ccgccggccg ccgggcctgg accgacggct tcgaggacat caaagcccgc ttctttggct 2880 ccagccagcg tcccgcctgg gatacggagc ctggccgcaa gtcaggcctg accctgctcg 2940 ggcccctgcc tcacgccacc gtcccctgca gcggccccga gcccacagca cagcggctgg 3000 ggtcccgctc ccagcagggc agcttcaacg gtgaggacat ctgcggctac atcaaccgca 3060 gctttgcctt ctggaaggag aaagaagctg agatgttcaa ctttggagaa tgaccctact ggcagcctgc tttccagaat gtggtttggg ggtgacttgg agtttctctt ttcttttcct 3120 3180 tgctcacacc cttggtgttc aggtgagccg ggcaaggctg cctccagtcc taccagttat 3240 cggaggctgc gggactgttc tgttgtggca tggttctcct ccgagctggg actcagactc 3300 cttctcacca ctgcacccag gaagcccctt ggcaggtcct gaagtgaggc aatgggccac 3360 cccagtccag ggcacctctg cccagccggc ccccgagacc tgggatgctg cctgtttctc 3420 acttgtcctt ccccagtgtc accagttacc ttggcgtcct gtccctcagt ttctgtggtg 3480 ctggtggcct cggccacatc catctttcat gtgagtctga ggtggcccca ggccctggtc 3540 ctgcccctgt ttctcctgct gaccttgggt cacacccctt cacctcccat ctgtgaattt 3600 gggggagctg gagtgattcc gaggacagat tccatgggca ggaggccttc ctgccaggcc 3660 3720 aggecetget tecteaaagg aggeteecea tggggeeeet gteeteeage etgaeeagee 3780 ctggcctagt cgtgggcccc agcaaggctg gagagcaggg acgtgggagt agcagtggct 3840 gagagagtcc tccaggcagg gtggctggtg cccactctca aaggctgctg cacacagagg

agaatgccgg	caggggtggg	cagcagccag	acctcagtgg	ggcgtggata	ctccgtgagg	3900
gcacctgggt	gtcacccaca	gtgcacctct	tcacaggggc	ctgggtactg	gagggaggga	3960
tacaggaagg	gagatggagt	ccgtcctcgg	gggctctggg	tgctgcggag	tattcctggg	4020
catggtgctg	ggcatggctg	gcatagggtg	tggcttgtcc	ccagcttctg	atggcagcca	4080
ggagaatggg	tcatcaccca	ggctctgggg	ctgaggaggg	ctgggcccaa	gcccacaggg	4140
actttggagg	tggggctctg	cagctgtgag	atggcccagc	agggagtggc	agggacggga	4200
ggcttcagga	atattcctcc	tggcatccag	gcccctggg	acagaggagg	gtgcagtcag	4260
gcgacaggct	tatctggact	ccctgcctca	atccctgggg	attgtccagg	caaaacctgg	4320
agggcagcgg	gcaagctgtt	ggatggaaca	gagagaccct	cgcagctgac	tagggcccaa	4380
ggggacggac	actcaagaag	atgtaaaatt	gggaggggtg	gtattggcca	ttggggcagg	4440
cagggccggg	aagggaagta	gcaccggccg	cagccccaag	ccagtggctt	ttccacaagg	4500
gcctaccctg	cagccggccc	gctccggctt	cctccactgc	tgaagaccct	gctgtagagc	4560
tgaagctgaa	catgtgtttg	ctaaataaag	attcccattc	ctagcgc		4607

<211> 3521

<212> DNA

<213> Homo sapiens

<400> 157

gttgtcctcc	tccaagtagc	ggtaactgcg	caccttgtgc	tggggccacg	ggatgcgggg	60
ctggcgcacg	ccccgccgca	gcttctgctc	catccgcagg	taggagaccg	cggccgccac	120
cagcgtcacc	agcagcaccg	ccagcttagc	ctgggggtaa	ggagagggat	gccagggagc	180
cgcggccgcc	tcgccccgca	ccttccccgc	ctatgcccct	cgctgagata	ggcccttccc	240
tcctccggga	gcctcccggg	ccacgcggcc	ctcaacttct	ccagcccctc	catccacgct	300
tcctggaccg	cctcctgcag	gcgaggctca	catccagcac	tgtcccttac	agtcgtcatg	360
cccctggcga	cctcagtgtc	ccacgctgta	agggaacaat	acaaatccct	tcgcctcata	420
gggtgcatgc	gccagtgttg	ataaagtgct	ggacacaggc	cctgccttcc	cagggctcac	480

540 aacactgtgt ccctgacaca cccgtgggct gtagtgatgc tcttcatggg gttttgacta 600 taatccgcag tcaggaatga ttttacacca tagctcagga catacacaca tatctgtatg 660 catacttcct gctcttttct tttttccaga cacagtcgct ccatttcccc accgcgcccc 720 ctccctccct tcccccaccc actgctggag cgccagtggc acgctcactt cagcctcaat 780 cttccaggct caagctatcc tcccacctct gtttcccaag tagctggaac tacaggcatg 840 cgccaccacg cccagctaat ttttaaattt tttgtagaga cagggtctcc tatgttgccc 900 aggetggtct tgaactectg geetcaagea atecteetge etcageetee caaagtgttg 960 tcttttttt ttttgggaga cagagtctcg ctctgttctc caggctgaag tgcggtggcg 1020 1080 cgatctgggc tcactgcaac ctccatctcc caggttcaag ccattcttgt gcctcagcct 1140 ccagagtagc tgggatcaca gggacgtgcc accatgccca gctaattttt gtgtttttag 1200 tagagacagg gtttcatagc ctgttaccca ggctggtctc gaactccaga tctcaggtga 1260 tacacccacc tcagcgtctc aaaatgctgc gattacaggc atgagccact gctcccggcc 1320 cactecetge tatttttagt tetattttta tttttatttt tattttgaga eggagtttet 1380 ctcttgttgc ttaggctggt tggagtgcca agaccccgtc tcggctaact gcaacctctg 1440 cctcccagtt caagcgattc tcctgcctct gcctcccaag tagctgtgat tacaggcacc 1500 tgccaccacg cccggctaat ttttgtattt ttagtagaga caaggattca ccatgtcggc 1560 caggetggtc tcaaactccc tacctcaggc aatccactcg cctcggcctc ccaaagtgct 1620 gggattacag gcgtgagcca ctgcgcccag cctttagttc tatttttaaa aaatgtttag 1680 caactgggac ttgctagacc gagccaccat cttttgggag cagagcatga gaagcctgct 1740 cccgttcagg ccatgaaggg agacagaccc aacatctgga gaacagggta ccaaacagcc 1800 cacaggatgg ctgtgatgca cccacaaatc ccctcagaga tgggcaaact gagactggct 1860 ggaggtgggc cagtaagtga ggtgctgagt tgggggccac ccagtgggct gcaggaatgg 1920 ggccttggcc cagagactgg cttgggaagg ggtggcgttt aggaagctgt gaagccaggg 1980 caggggctaa ggaagtatct gtcattcggc atggggcccc caaccctgcc cagtctcacc ttcatgtgca ggctcgagcc caggtacaca gtgaagatgg ccacagcctg ccaccagtgg 2040 2100 tagatggtga agatgaagtc ctgtctctcc ttgtcttcgt acaagactcc caggagtgct 2160 gcaggcaggc agtacagggc aggcagggga gaggtgtcac ctggggcctg gggctgccga 2220 gctaccatct acgaacttta ctaagccctg tatgtgtccc agcccgggac cagagagcgc

ctagaaagtg	ctgtgaggcg	gtcctggcct	gcccctggt	ggagaccctg	gtcaccacac	2280
tgctcacacg	ctaagcagaa	gtaggagcag	gtgcgccggg	ctgtgtggct	gcaggtggtc	2340
ccgctccgca	ccacatgcgt	ggcctcaaaa	gaagaaagct	ctgtgcttag	tcatgtcctg	2400
tccccaaccc	caggtgtaca	gtgccaagct	tgcaggcgct	gtttctcctc	ctcagccggg	2460
actagagaga	tcgaactgtt	tgcagctgcc	aactctgcaa	atcaaacctg	aagctaagca	2520
tggagagggg	ggcttccttt	ccagtgagtc	ctcccagggt	gggcagcaag	agtaatggat	2580
tgggagtcag	aagatgcaca	ctcattctca	ggactgtaat	gttggctccg	tgggtgattt	2640
gggtacttaa	ctccccagag	ctgcttttcc	caatggtgag	atgagcttat	gcctattgtg	2700
tgctgtgttc	tgaagttcta	aagtgagaaa	gagggcatgg	cacctgccag	atcatagggg	2760
ccactataaa	caccttcacc	aggcactcag	gacatgaaca	ctcctgtctt	ggggccttgc	2820
agggtgactt	taccccaca	gctatactca	ctgctgagtc	cagtcttgtt	cagggtgctg	2880
cccacaagcc	cagcaggccc	aggagtgagg	cgactgaggc	gcccaggctg	taagccatga	2940
ggaggtccac	tgtcctccct	gtgtggtgca	ccatggaggc	tcagactccg	tcctcaaggc	3000
tggcaagaag	acaggatgag	acatgagcct	cctgatacag	gtgacgggag	tggagcccac	3060
aggactggaa	cctcacactg	cagggctgga	ggcacagact	gactatttac	tattctgtgg	3120
cctggggggc	tcaaggcaca	gagctcctta	ttagccaaag	tcacccaagt	tccccaacct	3180
ctaaggattt	ccttataata	atgcaagaag	aagaagagaa	aagtgagtgt	ccatagaagc	3240
tttggggctc	ttcctcgaat	caggagaaag	ctggaggtgt	tcttccctgg	acgccatggt	3300
gttccctgca	cttgggtgtg	gaccatcttc	ttcttctccc	tgggctgact	gagatgctag	3360
gtctgacccc	acaaggccag	gccgacattc	ctgagtgatc	actaagaacc	agtttctcaa	3420
ccaccactgg	gattctgggt	cctcctgggc	tgctgcctgt	tctcctgtga	cccacctgtg	3480
agcaagaagg	tctccttcct	tcctgttgtc	tccatctatt	t		3521

<210> 158

<211> 3474

<212> DNA

<213> Homo sapiens

<400> 158

60	tgcattgatg	ggctcagatg	tatgatgacc	agatgatgtg	tgaccggctc	atgtgcgtgg
120	ggctcagatg	cgtgatgacc	agatgatgtg	tgaatggctc	atgtgtgcga	gccatctctg
180	tgcatgatga	tcagatgatg	gatgactggc	agatgtgcat	tgaccagctc	atgtgtgtga
240	gctcagatga	gtgatgacca	tctgatgtgc	gatgaccagc	tgatgtgcat	tgaccagctc
300	gtggcaacag	cagacgatgt	atgaccggct	gatgtgcgtg	gaccggctca	tgtgtatgat
360	tccgatgtat	gatgaccggc	gatgtgcatt	gaccggctca	tgtgtgtgat	gctcagatca
420	gacccgctca	tgtgtgtgat	ccagctccga	tcattgatga	gctcagatgt	gtgatgactg
480	aggagccagc	attgccgacc	gcaggagcag	ctggccagga	tgctattgcc	gcatccagtg
540	cggagagcgt	accacacgaa	ggcgccaggg	gccgcgaggt	gccagccagc	tcccagcagt
600	ccagcatctc	cttgcttcgt	ccctgagagg	gccgggtctc	ctgctcactg	ttccctgcgg
660	aggtgcaggt	caagcaagtt	tgtcttctaa	acgactctcc	tattgtaacc	cctcccagtg
720	tcccctgtg	agcctccctt	aggtgcccca	tgggtaggag	ggttggggtg	ggaagtgtgg
780	gtctccataa	ccccaaatcc	aactgtgaaa	ggtggaactg	cggctacgcg	ctgcagcagg
840	ctcttgctca	tatgttctat	tgcactctgc	aaaatgcctt	tgtttgagaa	aggttttgtg
900	caggtgcaat	tttgggggca	tcctacatat	attttacaac	cattgtgtat	tatcacagtt
960	atcacgatgc	tttggtctcc	aagttggggc	tgtagtggtc	gtgcagactg	tttgttacat
1020	gggaaaggaa	tttaggtttg	tgcttggtag	gtggttctct	gcaaattttg	acttggaatt
1080	gataaatgag	tacatgtcag	atttagtaag	aaatattcct	gttaactgat	atgtgtgttc
1140	agcagcagca	tgtctcagtc	caggagtcag	agaagctctg	ttctcctcag	aaggaatcct
1200	gggttgattt	tagcaattgc	cagagatctg	aaccccacat	agtaacaaac	ggttatgctc
1260	ctcactcagg	tgctgttgcc	tgttgtgctg	ttcctgaggg	tgcatcttgg	ctggctcata
1320	agggtgtggt	tcgggaagag	ttgccagata	tgcccgatgc	atagagccac	acccaagctc
1380	tgctcccatt	gacacccctc	ggctggaagt	tgcaaacttc	ctgttggttc	actgcacaca
1440	agggcagctc	gtgggtggga	cctaacttaa	cgggatggtg	aagcaagtca	ttgttgggca
1500	gacagccaca	caacctcagt	agattatgaa	aggagccagg	cagcaggaac	cccgtggctc
1560	gcgctcacta	gccgggccct	cctgtgagtg	ttaccatgca	accaccgaca	agacacctgt
1620	tgaaatcacc	tgaaagacgg	aactccacaa	gaatcttcac	gttagcttat	ccgtgtgaga
1680	ctggctgcaa	tcagggccaa	gggctggaat	gtaagtggca	cacacagcta	tgcccaggat

ggtccgtgtg ctgagctgcc tctctctgct gtgtgagttt ggattctgga acaatcgttg 1740 1800 gcataactaa ccactgagaa aagagacggg ggtgaggagg ctgccccagt tttctttact 1860 gttagctctg tgatgtgctg ttgttggctc catttcacag aggaaggtgc tgaggctaaa 1920 agagtttgcc caaggtctcg cagcgggtcc gaagtgcccg ggcactatgg gaaccctgtt 1980 gcttgtcggt gtctgtttcc aagacggcag aaagcctgac catcgcgggg ccctggcggg 2040 agegttgeca tacaagttte ettecaceag ggggageaeg tgeettetea geaaaeeege gacctgtgag cttcagaacc gggaaggagg ggacctgggg cttgtccagc ctggagcctt 2100 tttttttaa cagattcgga aaccgaggat cagagcgggg gtgtgctgtc ccccaaacac 2160 2220 atgcgtactg gttctcgttg tcatgcatgt tggtggtcct ggtgtctcca cataccccc 2280 accetaacte acaegtgeae acagaettte etgtgeeeae acaegeteae acgeaeatat 2340 atgtggatgc acaggcaggc aagtacacac gcatgtatgc acatgtgcac gtgtacatgt 2400 acctcactgg gcctcatttc ttcattccta aaactaaatt cctaattcct aaaagtgaat 2460 cagcacctgt gaggttggtt tcgggtgaga ttaaaatcgg tggcatttgc cgtatttggg 2520 cggacaagtc atgaacttga cattttagat aataattcag ggagatgtta tgataccacc 2580 cattattaag cagaggagac tgaggctcag agaagttagg taacctgcct gagtgttcac 2640 caatcgtggg aaggagagct gaagcttgaa cccaggtgtg ctgggtttaa atcctccctt 2700 tttctccccc tgagacagct ggtcattgag ggtcaggtga gaggtgctgg agctgagacc 2760 ccagcttggg ggttgcgcta aggaatttgg atttcatcct gcaagcagtg gggaagtcgc tgacggttga agagaagctg gagtttgata cagtggtagt gaggttttag aaaagttaat 2820 2880 cagactgtct ggaaaaagag aggctggtat cagggagcct ggctggcagg ggttacaggc 2940 caccagaccc gaggtgcgaa ggctcccatg gcagtgggta gaagagagac tttgaagaga 3000 cagcgagaaa gccttccagg gaaggatcta tgggaatcag ggggctgtgg agaagaaagc 3060 gggaagagag aagggagaag cagagctggc tttgggtggg tccaggaact ccctgccggc 3120 accegageag teceaceagg ggeteatece gaggtgtetg ggeaggaagg tgeeteetgg 3180 tgaggggttc cgctgcctca actctcagat gctccatgcg ctcctccagt ttcccactgc 3240 caggatecee accetgaact egeetetgge aaactttgaa tgggeeatge gttgggagge 3300 cgagacgggc agattgtctg agataaggag ttcgagacca gcctggccaa catggcgaaa 3360 ccctgtctct actaaaaata caaaattagc tgggtttggt ggcaggcgcc tgtaatccca 3420 gctacttggg aggctgaggc aggagaatca cttgaacctg agaggcagac gttgtagtga

gccgagattg tgccactgca ctccagcctg ggcgacaaga gcgagactcc atct

3474

<210> 159

<211> 3562

<212> DNA

<213> Homo sapiens

<400> 159

60 agetetegtt geeeaggetg gagtgeaatg gtgtaatett ggtteaceae aacetetgee 120 tctcaggttc aagtgattct cctgtctcag cctcccaagt agctaggatt acaggcatgt 180 gccaccacgc cctgctaatt ttgtattttt agtagagacg gatggggttt caccatgttg 240 gtcaagctgg tctcgaactc ctgacctcag gtgatctgcc cctattagcc tcccaaagtg 300 ctgggattac agtcatgagc caccgcacct ggccccaaac ttttttttt ttaagcaaag 360 aaattgtttc ctggataacc tcacataaag catcccagta tgtaaagcag ataatagtgt 420 tggaagtgac aacctggaat tctgtccatg gggactcttc tccttgtact ccccacacag 480 aaacccttca gcttatgctt ccaacctcag tgtccaaaga aactttagac aaatccagcc 540 ccttcattca cagatggaga cattattgtt agttgtagta aatgttagct aactaccagt acttacactt taaacgtgcc tggcatagga gaatgatttt atatgtctga tagtatcaaa 600 660 tccccacaac tacctgataa actaagtatt ataatgaccc tcattttgca ggtgagtaaa 720 cagaagtcta gagaggtaca atcacttccg aaagtcaccc agctggtaag tggtgaaggc 780 agaattcaga gcccagtgtg gctgactcaa tagcctgtgc catccacccc tacatgagtt gcccagggag gttagagact gtcccacagt ctcataggag ctgagcaggg acaacgaggt 840 900 ggcctggtgt ggagggaagg tcacgggtgt gtggggctgg agctctgggt ccaagatgtt 960 catcagctgc ctgtcctggc tggtaagaga ctgagggtga gtggtcagtg agcatgagag 1020 ggggaaggga gccttgggag accacactgg agaacctgga actagggagc tatagcaggt 1080 gtctgagcta gagaattaat cctactgttg gctgcacatc aatactggga caataggccc 1140 agatgtgtca ttcctaataa tcacaatggg gcaggatggt gctcaaagca ctttactggc 1200 atgatettaa teateacaaa geetetatga gagaggtgat gteatgatae eeattttaca

1260 gatgaggtcg ctgggggctc agggaagtga agtgctttgt ccagggtcac gtggctgaag 1320 agtgggggag ctgacacttg aagccaagac tggctgactt tcaagcccac atgcctctgt 1380 cagttaagtg tggtgatggt aatgctgtgt aacaaacaat cccccaaatc tctgtgctgt 1440 aggacagtaa gtgttgattt agctcgcatg tctaatgtgg gttggctgag ccaggctggg 1500 ctcagctggg cagctgtgtg ctcatccatg tgtctctcat cctgtcctgg gatcagtgga 1560 ctagcettgg catatteece teetgeteat ggeaggagtg caagggggtg ageagaaaca 1620 cacaaagtet ettgaggeet agaeteagga ceacacagag teacteetge eteattetat 1680 tgaccctagc aagtcacagg gccaaaccca gggtcaatag gtgggaaatg gtactctgtt 1740 cttttaacgg gaggaactgc aaagtcgctt ggcaagggtg agaatacaaa gaagggtaaa 1800 gaattggagg caagttttgc attatatcat attgtctgtg ctggtttaaa atatgttcac 1860 acagtetttg ataatteett caaaagatgg ageetaatte tacatetett gagtgtggge 1920 tagccttact gactcccttt taatgaatag aacaaagtgg aagtgatggt gtgcaacttc 1980 caaggcaagg tcataaaaga cattgtggct ccctcctcgc tctcttgagg atcacccact 2040 ctagggaage cagetgecat gtegtgggga tatteaagea geecagtgga gagacecatg 2100 tggtgaggac ctgtgatctc cagccagcag ctgtgtgagt ggcctatctt ggaagcagct 2160 cctccagccc cagttcagtc ttcagatgag actgcagctg cagctgacat cctgactgca 2220 acctgatgag agacccagag tcagaactgc tcagactaaa gttgctcctg aatttctgac ccgcaggaac tgtgagacaa caactgttta ttgttttaag ttgccaagtt ctggggtaga 2280 2340 tttgcttgca gcaatagata cgaatgctgt gtctaagtat tctgccaact cactgctgcc 2400 atagcaagge ccatcataac aagcgagget tggatggaag cagetttgte ttetacceag 2460 agaaccagca aaatcccaac aatttaccaa gattatagaa ccaaaaatac ccatggaaac 2520 tatagttgtt aagaaacatc tgtttttgag ctgtctaaat tgggtagttc tcaaaaggaa 2580 taaaaatgta tcagaggatg gggacagctg ggtggggact gatgccaact gcctggcagg 2640 ctcagctggt cactcgggtt ccttctcaga gctgaggcag ggagaaagat ccaaataaag 2700 atctgatggg gcagattaga cagagctgcc tgtagcaagg cactgagggc tgtgtccagc 2760 tgcaggggca gtacttaagc ttactgcacc cctactatgt gccaggtgca gggtgggcac 2820 ctgcatgtga ggaccaggga ttggggtgtt ggaagatttt ggcttttggc caggactaaa gggtgagagg tagtatggag aaggaattaa ggccctgtgg agaggcctgg gcttaaatcc 2880 2940 tggcattgat gtttaccagc tctgaggctt gtacgtggcc aatcacttaa acactctggg

ccagtttcct	caactgtaaa	acgggcatag	tcacagtgcc	tacttgatcc	atccttgtgt	3000
tcctctcagg	cttgctttgt	aagactcctg	gactccttag	gttttatcaa	tcctggtgcc	3060
cttccattgt	atcacatcct	tggatcacag	tgatgggttc	aggaatagac	acatgaccca	3120
agggaggcta	atcaggtgaa	tatagggaga	tgttctttct	ttcttaaggt	ggctacgttt	3180
aggacatgag	ccagggttgc	cagtgtcacc	catcacatgt	accatatgaa	taactcttgt	3240
ctaagatctg	gcaagagatg	gtggagccta	atgacattgt	taaagatcct	ggatacagcc	3300
atacctgaag	cgtatccaga	attccggctg	agtatctgta	ctagtcaatg	ttctccaaat	3360
aatatacaca	ggcataactc	agagatactg	taggtttggt	tgcaggccac	ctcaataaaa	3420
caaatattgc	aataaagtgg	gtcataggaa	tttttgattt	cccagtgcac	gtaaaagtta	3480
cactatagtg	tattaagtgt	gcaataccat	tacatctaaa	aaccactgta	cataccttaa	3540
ttaaaaatac	tttattgcta	gc				3562

<211> 4216

<212> DNA

<213> Homo sapiens

<400> 160

60 tttaatgaaa acttgaaaaa aaagcctcat tttaaaacaa gctctcttac cattctcaca 120 ttttagttta gaggttaaaa aatagaccag aattctggaa atagtatatc agaataaaat 180 tgagatattt ctgatttatt tgaggatcat cttgagaagg gttagatttt taactcattc 240 agagggccta atatttaaag caggatgatt ttatgcttag acaggggaca tggtgaaatg 300 gcatagcaat tgctcttcgg tttctgttct ttttctttat gagacaggta tgtttggctc 360 aggcagcggc tgtttgtttt tcctctgctt atcactgtac atttttctat caaatgcttt 420 ggttgcttgt tttattgaga tccttttttg gttttcttag caatagaatg aaaacctcag 480 aactctgggt aaattaaatg caggtatttt taatcttttg ataatgaaga gctcttatcc tttaaaagat tcagatgtaa tctttggcaa tcactgattt atttctagga aaccccactt 540 600 gtgaactttc tatctgtaca accctaggga cctgggactc cctgtttctt gcgtggggtg

660 attgagagca cacgttttct tcaaaagaag gtgtgtctct ctttggcagt cccagtagcc 720 cttaggagac atgggtgggt gagggaaaca gcacactctt ctctcagttg ttggaaaccg 780 gtttggtggt tcccacagtc tctggctctg tcactcttct tgatcgttgg caggctctca 840 gccagttgag aatcatcact gctttaggga cccgctactg gttatgtgag tatgtagcaa 900 gcacaagttg ggaatcgctg atctaagtaa ttatgaaagt aagctgttac ccacccagaa 960 ggggtaaggt cgtgcatagg atgacctggg gtgggtctca tgtgctgccg tccctgtgag 1020 gtgaggggag tacatttcaa gagcaaaatt agcaaactct tgaatcatca taactgctgt 1080 tgtggtagat attctgaata ccaaaaatta aaagtgaatt taaactgtca gtggaaacac agcagtctgc attttaaaaa cttagagctg tccaggcaca tagaaaagtt aactgtctga 1140 1200 ggggaaatag aatgtggtta agtttaaaga atatgcttag tattataaat gttgagtgat 1260 gagttgttta ccatttataa taaactgtta aatgtatttc tgggaacatt ccatggcagc 1320 atattctggg ttgttgttta tgtgttccaa tgtagacaaa ttatatttgc cttgggaaaa 1380 attctaagta atcaaaatta tatttaaata ttaaaaaaatc acattgaagt tcaatttgtg 1440 ttagctgtat taaatatctt ggtcactatt gttcttgtaa catttgcttt tgacaacaca 1500 ttttgagatc taagaaaggt agtacattaa cagtgcatta attaatgttt tgttagaaac 1560 taaatgttaa caaaaagttt tgtgtgtatg tgaaggtggc aacttccttt tgtattatat 1620 taacactttt taaatgtatt cagtcagtga aaccaatgat tattatagca ccaacacttt 1680 cattcaagga agcatttgag tcttataatt tgttttgcat ggtacaatgg ttctactaaa atatacttgt gtaataggta ctagatgatt taaaaacaaa accggagaaa ccatttaaaa 1740 1800 agttccatag cttgttatac aaaatatgca ttgctaatag tagaagccat atattgccat 1860 tgtactgttg taatacttaa cagtgctcat ctggtgctac ctgtagacta tttggtatta 1920 acgtctgcta gacccttctt cctatttctt cttgaatgta taatgtgtgc cttttaagtt 1980 acttetagtg ttgaatggta aaatetttgt ggtatttttg tattatacte tgeaetttae 2040 actttcttgg aaaggaaaat tccagactat ccagtttaaa tagtctttta aaaatattta 2100 taatgtttac aataaatatt ttacatattt taattcaaca tctgcaaatt agaaaaaata 2160 ttttatatgg tttgttgcta tttaatgttg ctctatttat tttctatctt ttagaatggt taaaatgaga atagcaatgt ttgtcttttg atgtggaagt gaacttttac aaaaccatgg 2220 gtataattgg attgtcttac cagctgttcc aacgtatcaa ccttttattt tagtcatgtc 2280 aatatgagtt agatgttact ctcagccacc tgttaataat ctcttcttac tgttttttc 2340

2400 tttttaaagt agactgatga ggtttaattg attgattcag gtcgggaata aatttccagg 2460 gctaaatgaa aactatatag agatgttaat agttgctttt tacctagact aaatacaaaa 2520 agtgactaga aagtattaga ttttttttcc tttttttct ttttttgagg cggagtctcg 2580 ctctgttgcc caggctggag tgcagtggcg cgatcttggc tcactgcaag ctctgcctcc 2640 cgggttcaca ccattctcat gccttggcct cccgagtagc tgggactaca ggcgcccacc 2700 accacgcccg gctaattttt tgtattttta atagagacgg ggtttcaccg tgttagccag 2760 gatggtctcc atctcctgac ctcgtgatcc gcccgtctcg gcctctcaaa gtgctgggat 2820 tagaggcgtg agccacccgg ccgggccaaa agtattaaca tttttttaat tcaaaatctt 2880 ggcttatgct gttagacctt tttactagat ctttactcct atcctcaact tttttctaat 2940 tctctagctt ttggtatgac atctcttgcc tcaaaaatct cactttttaa aaactgacaa 3000 aacttactgc actattaaca acatctgtag caatgagtgt gttataaggt ggatgcaagg 3060 tatcttatag gagataattt taaaatgtta caataataat caaaaacagt attttatggt 3120 tgaaatcttg agaacagaat tatgccaagc atttgtataa ggctaatgtt tagcaggaag 3180 cattcatgat caacgattta tcttgaaaat aagattcctt cgtctgaggg attgatctgt 3240 atgtgtgtgt atatttagtt tctcatgaca agaaaaatgg tattcagtca gctataatat 3300 cagtatctat aatctatttc tcggtaaaca tatttgtaca tatacacgtt tatttttcta atttaacaga tgtccttggt atttatttgc attttgtcat agcattcttg ctcatatgac 3360 3420 ctgcagtaaa acaaaaacaa acccaacttt taaatgcaaa actgatttta aagccatttt ctttttttta ttttttattg aaacagagtc tcgctctgtt gcccaggctg gagtgcagtg 3480 3540 gtgcgatctc agctcactgc aacctccacc tcccgggttc aagcgattct cctgcctcag 3600 cctcccgagt agctgggatt acaggtgccc accaccacgc ctggttactt tttgtatttt 3660 tagtagagac agggtttcat catgttggcc gggcggtctc aaactcctga cctcaggtga 3720 tetgeeegee teageeteee aaagtgetgg ggttacagge atgageeaee acacetggee 3780 ttaaagccat tttctaggat tttgttgtta atttttgtag agatgtagtc tcgctatgtt 3840 geccagactg gtettgaact eetggeetea accaattete eececaacee eeceaceeag 3900 3960 tgagtttagg aagcagtgga ttaggtgcat tagttttaat tacgcattaa agtttgagta 4020 aaaaaattact ttttcaaatt gcttttaatt aaaagatagt attattttc cctatctgat 4080 tatcagtttg tcttgattat cagtttgtct tgttaataac ttgcatccat ccaaaacatt

agtatttggt tttagtcatt tcttttggcc tttatcaagg gaaatattta tttaaagaag 4140 gtctcattta ctccacctca tttagaatga cttttccccc ccgtgtgtta ataaacgtat 4200 ttctttacat tgcttt 4216

<210> 161

<211> 3996

<212> DNA

<213> Homo sapiens

<400> 161

acatttgtcc	tgagtcacct	gtccagagca	ggtggtgaat	attgtgtcct	actcacggca	60
tctcaactat	cggagcctgg	gatctgactc	aaaggccggc	ctccgtctga	gaactgagcg	120
tccatttctc	aatccttgcc	ggctctgacc	caggcctggg	ccacaggctg	tccgggaata	180
agtggtgctg	caatccctgc	tgggcagatg	gagagaggag	caagggagat	ggcagccccg	240
ggggactgtc	cagcaggaaa	ggctgcggga	acttcgagac	caacacggtc	cctgagcaca	300
gctcagctcg	tgcagccatc	tgggggcctc	caggcttcag	tcatctccaa	catcgtgctg	360
atgaagggcc	aggctaaggg	tctgggcttc	agcatcgttg	ggggaaaaga	cagcatttat	420
ggccccattg	ggatttacgt	caaaaccatt	tttgcagggg	gagcagcagc	agccgatgga	480
aggctacagg	aaggtgatga	aattctggag	ctcaatggtg	aatcaatggc	tggactaaca	540
catcaggatg	ctttgcagaa	gttcaagcaa	gccaaaaagg	ggctcctcac	cctcaccgtg	600
agaacccgcc	tgacggcgcc	tccttccctg	tgcagccacc	tgtctcccc	actgtgccgc	660
tccctgagct	ccagcacttg	tatcaccaag	gacagcagct	ccttcgcctt	ggaaagcccc	720
tcggctccca	tcagcaccgc	caagcccaat	tacagaatca	tggtggaggt	ttctctgcaġ	780
aaagaggccg	gcgtgggcct	gggcatcggc	ctgtgcagcg	ttccctactt	ccaatgcatc	840
tctggcattt	tcgtccacac	gctgtcacca	ggatccgtgg	cgcacctgga	cggacgtctc	900
cggtgtgggg	acgagattgt	ggaaatcagt	gattcccctg	tgcactgcct	gacgctcaat	960
gaagtctaca	cgatcctgag	tcactgtgat	cccggtccag	tccccatcat	tgttagccga	1020
catccagacc	cacaggtctc	tgaacagcaa	ctcaaagaag	ctgtggccca	ggctgtggaa	1080

1140 aacaccaagt ttggaaagga gaggcatcaa tggagtctgg aaggtgtcaa aaggctggaa 1200 agcagttggc acgggcggcc caccttggag aaggaacgag agaagaactc agcaccccg 1260 categeaggg eteagaaggt catgateege teeageagtg acageageta catgtetggg 1320 tccccagggg gaagtcctgg gagtggcagt gctgagaagc cgtcctctga cgtggacatc 1380 agcacacaca gccccagctt gcctctggca cgggagccag tggtgctttc tatagcatcc 1440 tecaggetge eccaggagag eccaecete ecagagagee gggacageea eccgeegetg 1500 agactgaaga aatcctttga gattttggtg agaaagccta tgtcctccaa gcccaagcct 1560 ccacccagaa aatactttaa aagtgacagt gaccctcaga agagtctgga agagagagag 1620 aactcctcat gctcttctgg gcacacccca cccacctgtg gccaggaagc gagagagctg 1680 ctgccactgc tgctaccaca ggaagacaca gcagggagaa gccctagtgc ctctgccggc 1740 tgcccaggac ctggtatcgg cccacagacc aagtcctcca cagagggcga gccagggtgg 1800 agaagagcca gcccagtgac ccaaacatcc ccgataaaac acccactgct taagaggcag 1860 gctcggatgg actatagctt tgataccaca gccgaagacc cttgggttag gatttctgac 1920 tgcatcaaaa acttatttag ccccatcatg agtgagaacc atggccacat gcctctacag 1980 cccaatgcca gcctgaatga agaagaaggg acacagggcc acccagatgg gaccccacca 2040 aagctggaca ccgccaatgg cactcccaaa gtttacaagt cagcagacag cagcactgtg aagaaaggtc ctcctgtggc tcccaagcca gcctggtttc gccaaagctt gaaaggtttg 2100 2160 aggaatcgtg cttcagaccc aagagggctc cctgatcctg ccttgtccac ccagccagca 2220 cctgcttcca gggagcacct aggatcacac atccgggcct cctcctcctc ctcctccatc 2280 aggcagagaa tcagctcctt tgaaaccttt ggctcctctc aactgcctga caaaggagcc 2340 cagagactga gcctccagcc ctcctctggg gaggcagcaa aacctcttgg gaagcatgag gaaggacggt tttctggact cttggggcga ggggctgcac ccactcttgt gccccagcag 2400 2460 cctgagcaag tactgtcctc ggggtcccct gcagcctccg aggccagaga cccaggtgtg 2520 tetgagtece etecceagg geggeagece aateagaaaa eteteceee tggeeeggae 2580 ccgctcctaa ggctgctgtc aacacaggct gaggaatctc aaggcccagt gctcaagatg 2640 cctagccagc gagcacggag cttcccctg accaggtccc agtcctgtga gacgaagcta 2700 cttgacgaaa agaccagcaa actctattct atcagcagcc aagtgtcatc ggctgtcatg 2760 aaatccttgc tgtgccttcc atcttctatc tcctgtgccc agactccctg catccccaag 2820 gaaggggcat ctccaacatc atcatccaac gaagactcag ctgcaaatgg ttctgctgaa

acatctgcct	tggacacggg	gttctcgctc	aacctttcag	agctgagaga	atatacagag	2880
ggtctcacgg	aagccaagga	agacgatgat	ggggaccaca	gttcccttca	gtctggtcag	2940
tccgttatct	ccctgctgag	ctcagaagaa	ttaaaaaaaac	tcatcgagga	ggtgaaggtt	3000
ctggatgaag	caacattaaa	gcaattagac	ggcatccatg	tcaccatctt	acacaaggag	3060
gaaggtgctg	gtcttgggtt	cagcttggca	ggaggagcag	atctagaaaa	caaggtgatt	3120
acggt tcaca	gagtgtttcc	aaatgggctg	gcctcccagg	aagggactat	tcagaagggc	3180
aatgaggttc	tttccatcaa	cggcaagtct	ctcaagggga	ccacgcacca	tgatgccttg	3240
gccatcctcc	gccaagctcg	agagcccagg	caagctgtga	ttgtcacaag	gaagctgact	3300
ccagaggcca	tgcccgacct	caactcctcc	actgactctg	cagcctcagc	ctctgcagcc	3360
agtgatgttt	ctgtagaatc	tacagaggcc	acagtctgca	cggtgacact	ggagaagatg	3420
tcggcagggc	tgggcttcag	cctggaagga	gggaagggct	ccctacacgg	agacaagcct	3480
ctcaccatta	acaggatttt	caaaggagca	gcctcagaac	aaagtgagac	agtccagcct	3540
ggagatgaaa	tcttgcagct	gggtggcact	gccatgcagg	gcctcacacg	gtttgaagcc	3600
tggaacatca	tcaaggcact	gcctgatgga	cctgtcacga	ttgtcatcag	gagaaaaagc	3660
ctccagtcca	aggaaaccac	agctgctgga	gactcctagg	caggacatgc	tgaagccaaa	3720
gccaataaca	cacagctaac	acacagctcc	cataaccgct	gattctcagg	gtctctgctg	3780
ccgccccacc	cagatggggg	aaagcacagg	tgggcttccc	agtggctgct	gcccaggccc	3840
agaccttcta	ggacgccacc	cagcaaaagg	ttgttcctaa	aataagggca	gagtcacact	3900
ggggcagctg	atacaaattg	cagactgtgt	aaaaagagag	cttaatgata	atattgtggt	3960
gccacaaata	aaatggattt	attagaattt	catatg			3996

<211> 4470

<212> DNA

<213> Homo sapiens

<400> 162

atgtcagaaa catccgagga ctacagagac cttggtgata agtgtgtctt tctttctctc 60

120 ctettettee teteetgeat ggeeteecte tetgeeagea etggaaagte etgtttgate 180 agatgagcaa caagcgttcc aacagcttcc gccaagccat cctgcagggc aaccgcaggc 240 taagcagcaa ggcctgctg gaggagaagg ggctgagcct ctcgcagcga cttatccgcc 300 atgtggccta tgagaccctg ccccgggaaa ttgaccgcaa gtggtactat gacagctaca 360 cctgctgccc cccacctgg ttcatgatca cagtcacgct gctggaggtt gcctttttcc 420 tctacaatgg ggtgtcacta ggtcaatttg tactgcaggt aactcatcca cgttacttga 480 agaactccct ggtttaccac ccacagctgc gagcacaggt ttggcgctac ctgacataca 540 tcttcatgca tgcagggata gaacacctgg gactcaatgt ggtgctgcag ctgctggtgg 600 gggtgcccct ggagatggtg catggagcca cccgaattgg gcttgtctac gtggccggtg 660 ttgtggcagg gtccttggca gtgtctgtgg ctgacatgac cgctccagtc gtgggctctt 720 ctggaggggt gtatgctctc gtctctgccc atctggccaa cattgtcatg aactggtcag 780 gcatgaagtg ccagttcaag ctgctgcgga tggctgtggc ccttatctgt atgagcatgg 840 agtttgggcg ggccgtgtgg ctccgcttcc acccgtcggc ctatcccccg tgccctcacc 900 caagetttgt ggegeacttg ggtggegtgg cegtgggeat caeeetggge gtggtggtee 960 tgaggaacta cgagcagagg ctccaggacc agtcactgtg gtggattttt gtggccatgt 1020 acaccgtctt cgtgctgttc gctgtcttct ggaacatctt tgcctacacc ctgctggact 1080 taaagetgee geeteeece tgagggetgg aggeecaagg teggggaggg gagggaaaag 1140 cagcacccac agggagcgcc tgcgaggttt cttctcatca ccagctcagc taggccgggc 1200 agacaaggac agaagactct gggccactgt aatgtttgtg tttagatttg gacacacagt 1260 ggagaccett ttetgaaagg catetggegg aggagttgat gtggetgetg tegtttttet 1320 cggctgctct gatgacatcg ggccagggtg aaggtctggg gtggggtgtg agagtggccc 1380 tccctcacct gggctggct tcttccatgg ggccaggggg tgccccctca ctgctgcgga 1440 ttgagcagca gcttcttcct cctcctctac cctcagagac cctaagagac atgggaaggc 1500 tegaaggttg ttgcgtecag geatggeece tetetagete agaaataatt geaggeeatg 1560 tggtgtctcc ttgacacctg ctgtgtctgg ggctccagta agaagagggc ctactggaca 1620 tgtcagctgt gacctggctg aaaccagggt gccctcctgg gctggttggt gtgcaccggg 1680 gcatgatctg ttgtgcctgg gttgggcaga gcagggagcc tgtaggctct aggacccctc 1740 ttgtgctggg ggtacccagt gagagggacc catgcagggg gaataaactt cattccaagt 1800 tccaccetgg agaagacaga cccaggacca gettcagact tetecetece tttettecag

1860 gatattggca tctcacacgg gtgccccagc ctccatgccc agccttgttt tagggtcttt 1920 ttctttcctt ttgctgccct gacactactt tgtgcctctc tttggttatg gagacagtgt 1980 tttgaaacat tcatgcgtgt gtgtgtgtgt gtgcgtatat gtgtgtatgt gatgggaaag 2040 gtaactgggg cacgacagcg cctgcagaga aggcatggag gatgcagggg gcccatgtgg 2100 gcatccgtga gaggtggcag accgtggtgt gctgtggttg ctgaatgtcc ttgctttgac 2160 aaagcctgcc cccttccttc ccatctcctg tcccttccac acctgcccct gagcatcact 2220 gaccggtggc agaatggccc tgctggaggg agagctcaag ccctccaagg atccctggat 2280 gctgaggttt gccaggttca gctcttgttt ccgtctgaga tggccttcat atccaaaaag 2340 gttccatcct atctcctta ggagagaaag agctttgggg gcgcaagaga ggctggggta 2400 ggaatgttga ggccatgtgt ccatttaagt tagggggaca ggaggctaca ggaagaggaa 2460 ttccagttta gttggaaaac tttgcctcag gagaattgtt gggtgcatgg atgaacctca 2520 gagggagggc agccagtagc ctcggaggct tggatgcggg agagaacatg gtggttatca 2580 aatccacccc accccattac acaggtgaga aaacaagatg gagggaatga ccctcctaac 2640 aggagetggt geaggeeceg aatggaggge atgaggatga cetttgacaa aagatgacae 2700 tecetttate gtgetettgg aatteteaac caetgacage ecagaagaac aaagaacgee 2760 aggcctggga ggaggcaggg gggctgggcg tgtccagaaa caggggcagg agtgtgggaa 2820 eggtetteet eeageetggt geceateetg geeettgagt gtageagggt eeagggteag 2880 tcaggccagg catttggggt cttgggccac agtggcttcc catcctggtg actacatgta aatgggctca ctcactcact ggcaggcgag gcccagccat accgcatctt ggcccactgc 2940 3000 taaatagatt gccctggcct catccacata tgtagttccc taggtcctgc tcccctgcac 3060 cagtgccatg ctgagggccg cagcctgtgg cactgtgggc ccacgccttt ggcggtgttg 3120 cgtcagcctg gggcgtcttg tgtgtgccct gcccaccgtt ctctgcccta gtgatagaaa 3180 gatgtagatg gaagtcagtg cctcagagga ggaggctctg aggctgtgga gctgggctca 3240 gggaagacca ggggaggatg cagatggagt caggacattg ctgcctctgc ctgggctgca 3300 gccgcactaa gctgagcgat gaggtccttt cctggaggga tggagaatcc cctccagatt 3360 cctgtcctgg cccctgggga ttctgtggtg tgggtggaat gagcagagtg ccacctctgt 3420 ctggtatgac ctggagaggg ggcttcctct cttaggggtg agaaagcatt gaactagaag 3480 attctagaaa tccctcatag aagcactcag ctccctcggg gactcccagg gaagcttgtt 3540 actgagaagg acagtggagg cggaatcgtg tctcccacca tgttaagtgt gtcctctgct

gccaaggacc	ctcgtctaca	ccttagacca	ccagccccag	ctgttctctg	tcagcacacc	3600
cacctccatc	ccctctccca	accatgactt	ccaagcgggg	ccacagggtg	gggtcatagg	3660
gtcacttcac	ctgacccagg	cctctcccca	ggtcaggagg	cagctgtctg	gtcagagggg	3720
ttctctttgt	ggcatctggc	tttctcctca	gcaggtccca	ccaccctctc	agcagcactt	3780
ccccatggcc	aaggctggcc	gtgtcctctg	tgcctctttc	cttgtctgag	gtggctgcca	3840
gcccaggggg	tggtgtgtaa	atcttcaggc	tggtggaggt	aggttggcct	tttatccaca	3900
ggatacagaa	actgaaagct	ggggaatccc	caaacagcag	ccatagactc	actggctctc	3960
attaaacggg	agaggaatca	cagaaactgg	ggaagggaaa	acaaaccttc	aaaggagaaa	4020
tttcgcttta	atgacaccat	tcatcattcg	ttttttaatt	aggaaaagct	ccctaatgag	4080
gctcttttgc	cagctaatag	gactctcgat	ttccatgaga	accattcttg	cccagaggat	4140
taggggagct	gttgctcacc	acaccaggat	cttcccccag	cgtccaattt	aatttgcaaa	4200
tacgtaatgc	agattccctg	ggtgccgtga	aagcctttcc	tggcatcatt	catgttgctc	4260
cccgtgctgg	ctggaaagca	cggttctcct	ctgccttaaa	aacagtgccc	aacagtgaac	4320
tgcccctccg	aggacttgag	taagtggaaa	aaacaaaaca	cagactgcaa	tgtttgtttc	4380
taagtatttt	tgtattgtgt	acattctgta	tatttttgtt	gtaacatatt	atttgagcac	4440
agattccatt	aaatatttt	tttctttttc				4470

<211> 5053

<212> DNA

<213> Homo sapiens

<400> 163

gagctggaca aggtgtggca gctgcaggca gccgggatag ggacgcagac tttcctacag 60 ggagagggcac tgctgagacc ggggcccacg tgggaggggc tgtcggtcat ggccagtctc 120 aatgacaccc tggttctgga ggggacacca ttttctctag gaaacacaca tggactgttc 180 tgggtgcagg gaagtccagt cggcgactga ctcttaagtg attcaggagg aagttctttg 240 tactcttctt ccagcttttc tgtaactgtg attgcctcag aattaaagca gaatggccaa 300

360 ggaccccaca gagagagtga cccccccaaa ggaggtggca ccttttcaga ggagtgaggc 420 tggggagagg gaggcgtccg aggcactgcg agggaggagg caggcggtgt cccctcgttg 480 tgctcccgct ctggccccgt gttgagtttt cagccgtcca ctggggcccc ttctgtacac 540 atcttttgta gtcaggatgg ggagcacctt gtaaggtccc tcctgtgcga cctgctgaag 600 actggggagc tctgggagca ggcaggtatt tgtgctcatg gtgaagggag aggggctgtc 660 ctctcctgga gggcagggtc aggacttcct cactgtgccc ttggcacctg caaggtagcc 720 ggctgtcatg agcggcttgt tgaatgagtg acagcttaaa tgaggctttg agagtgacag 780 tagctggcac ttagagtctg cagctgtgcc aaccctgtcg ctccggggat atttccaccc 840 acactacaca tcaggcacca aatgtgtggg ttttccacac caacaattcg ccagtcctct 900 gcagacacca gccaggcatc ctgtaattca gttcagtctg accctgccgc ggttatcagg 960 gaccccagcg ttaggggctc agtcacccc cacttcagat gctaattgca agtagtgggt 1020 ccctggggta cccacacttc tgtccatctt ggctacacat tgggagttcc tacgacccct 1080 tcaggtttga tgatttgcgg tagtggctca cagaactcag gaaggcactt ggtttgcatt 1140 gccagtttac tataaaggat gccacagcgg gcacaggcag gcagctgggt gaggaggggc 1200 acgggcgagg cccagagggt cctaagcata ggagcctttg tccccaggga gttgtgtggc 1260 tggccttaca gcacggggat gagttcacca aactgaaagc tttccagagc ccctagttcc 1320 aggatttcca tggaggcctc atcatggaga catgatcagt tatgaactca gcctccagcc 1380 cctctgccct ttttggaggg tgggggtggg gccgaaaggt ccaggcttct catcgtggct tggtctttat gatgaccagc cccctcccaa ggccatccag gagcccacca agaggtgcct 1440 1500 cattagaaca gaagactctc ctgtcacctg ggaagtccaa gggatttagg agctctgtgt 1560 caggeacccc tategeeect gteacteagg aaattaceag egttetgaga getetgtgte 1620 aggagecagg ageaggggee aagtgtgtte tteteattet ateggtgeeg eageeaggge 1680 cgcggttgtg cagccgtgtg gatcagctca gcccgtcctc acccagccgt gtgaggaggc 1740 cgaggccaca caggtggatg gccttccctt agagttactt tccagagcct gggtgcttag 1800 ccgctatgcc ccatgtttaa tattcttgtg ttccaatgta acaactttaa aattacacag 1860 gataacactc ttgataacat tttaataaat gggtgttttt cttttcaaga aattttgact 1920 tgcacttcag atttcctttt taatattttc gttgagcgga tccttgctat tccataagag 1980 gatgtgtcca gtgttgtgga agatttcatg ttttaaatcc tttgtacaga aatcctgctc 2040 ccaagtcaca gataggctga cgggtcagag ggcaagacgt gacccagggc cgagagggtg

2100 agtgaccagg aaaatcggat tcatcagttc acttgtttgt ttcagaaacg tgcacaaaga 2160 cctgctgcat gaggccctcg tcttcagttt ctgtttcatg cccagcatta aaccaagtat 2220 ctcattttgc caatttgact tctgtagggg ccatggcacc tgcaaggtgt ttctcagcaa 2280 gattgaggac cgtgtttcag ggcgtggggc attgggcttt gtccacatgg gctggcctga 2340 agcccagccg gctactgcca cagcgggctt ctcccaggct gctctcggtc ggccgtgcgg 2400 acctcgccaa gcatcaggaa ctcccgggga agaagctgct ctctgagaaa aagctgattg 2460 cacctacctt agtgacctac agaacagctt tcctagccgg gcacagtggc tcacgcctgt 2520 agtcccagca ctttgggagg ccgaggcggg tggatcacga ggtcaggaga tcgagaccat 2580 cctggccaac acgaaaaggt actttgtgga ctatcggaga gtgcttgtct gtggaggaaa 2640 cggaggcgct ggggcaagct gcttccacag tgagccccgc aaggagtttg gaggccctga 2700 2760 cctgtcgtcg gtcctgtcgc ggtaccaggg tttcagtgga gaagatggag ggagtaaaaa 2820 ctgcttcggg cgcagtggcg ccgtcctcta catccgggtc cccgtgggca cgctggtgaa 2880 ggagggaggc agagttgtgg ccgacctgtc ttgcgtggga gatgagtaca ttgccgcgct 2940 gggcggggca ggagggaaag gcaaccgctt cttcctggcc aacaacaacc gtgcccctgt 3000 gacctgtacc cctggacagc caggacagca gcgagttctc cacctggagc tcaagacggt 3060 ggcccacgcc ggaatggtgg gattccccaa cgccgggaag tcctcactgc tccgggccat 3120 ttcaaacgcc agacccgccg tggcttccta cccgttcacc accctgaagc cccacgtcgg 3180 gategteeae taegaaggee acetacaaat ageagtggee gacateeeeg geateataeg 3240 aggcgcccac cagaacaggg gtctggggtc cgccttcctc aggcacatcg agcgctgccg 3300 ctttctcttg ttcgtggtgg atctttctca gcctgagccg tggactcaag ttgacgattt 3360 aaaatatgaa ctggagatgt atgaaaaggg cctgtctgcg aggccccacg caatcgtcgc 3420 aaacaagatt gacctccctg aagcccaagc caatctgtcc cagctccggg atcacttggg 3480 acaggaggtc atcgtgctgt cggcgttgac cggcgagaac ctggagcagc tgctgttgca 3540 cctgaaggtg ctgtatgacg cctacgcgga ggccgagctg ggccagggcc gccagccgct 3600 caggtggtag ccacgccaga gcggggtcgc ctctgggcct ctgtctgagc aaacctgggt 3660 gtgaattcgg tggttttgaa tgcataaagt gccttgtgga cacggggggag ttgtggtgct tctgggtctc tgggccccgc ctgctggcct gggatgccct catgttggga agcattccat 3720 gcccccacc ccgcctgccc tccgtatttc ctgcacctgt cagcctgcgc cgactgatga 3780

3840 gccagttgct catttgtgct gattaacacc cctaataagg ggttggggtg cccataacgg 3900 ggtggccctg ccgctgactc gggtctccgc catgcacgcg tggactctcg gatgagctca 3960 gcagaaccgc acagccagag ccccaggtca gaagtgcaga ccagggttct cagcacagtg 4020 cccgtcgtgc ttccatggct tgctacggag agagacctct ggatccacac tgggggctgcg 4080 tctggcccgt tgtccagcag ccctgcggta ccgcaagccc aggcaccagt gtctcggggg 4140 gcctcactgc tgcgcaaggg gtggggccga ggatgcaagt ccaggcagag cggcgcaggc 4200 agetgtgage ttttetecat cageegtetg agaagageag tgaggeeage tgetteetgt 4260 ccttcagaac acttctctgt gctcagtggg agccaggaag cctcaggctt cacgactgaa 4320 tgcacccaat atccgacctg gctgcgtgtt tctggctggg ctgccgtgtg cacagcaagt 4380 taactagagg ggctgtgggc catggaactg tcagcgttat tctcagaagg cggccgtggc 4440 atgggcaggg tatagtgagg agtggaagga gacgtgtgcc tggtaatatg gggcggaatt 4500 tccactcagc tccatttgct ggggatttaa agagaaccct tgtgctgcgc caggcagtta 4560 ccgagccgaa gggagatgat gggccttcgc ccctcagtgg gatggcagct gagggggccc 4620 tgcatttgac cctcgagact gcagcagtgc ctttcctgtc tgtggtttaa gtctttgcag 4680 tcaagtactg atgcatccaa gccaggccta tgcctggtgt ctccctgact gcagaggagc 4740 cccagggcaa ggacagctca gctgctggca gcctgcctgg cccatagaca tcccccaagt agtctcaggc ctctgacatg tccctgaggg gcccctaaga aagaaagtgg aggggacact 4800 4860 ccagaggctg tcgtgggagg atcatgtgag cctgggaggt caaggctgca gtgagccgtg attgcaccac tgcactccag cctgagtgac agagcgagac cctgtctcaa aaaacaaaca 4920 4980 aacaaaaaca gaacattctg ggcacggtgg ctcatgcctg tagtcccagc actttgggag 5040 gccgaggctg gtggatcaca aggtcaggag attgagacca tcctggctaa cacagtgaaa 5053 ccccgtctct act

<210> 164

<211> 5146

<212> DNA

<213> Homo sapiens

<400> 164

60 aatgtttccg taagtatctg cacaacggct tcacttcctt cccaggccgc ggtgctcaaa 120 ccacaaatgg cgtgggctgg gctcaggctc acgttaggag tacatcttcc tccctttctc 180 ttctggtggg ttcgtatggg ggtggggaag tgggtgggag agaatgtttt gcattcattc 240 tttttgaata ttagtcaaat tgggccgtta aatggaacat cccaaatttt cataggtact 300 ttcaatccta gttgccattc tttctgacta taatctttca tccaaacgtg acacaaatgt 360 gtaatatgtg cttgagagcc atgacttggt gggcttgcaa gaggacaatg gacacccgcc 420 ttttccacat cagctgggca ggatgcagac aggggcaccc tctccctcta ttttcaaagt 480 cctcaaaatg gcaaaaatgt ggctagggtc ctatctgtgc attaatagac aaaagaagca 540 gagagaatga ctagggcatt atatgttatt ttcaaagaag cagttgttga cacaactagg 600 gaagaaatac gaaccgatcc tccagcacac acgtaacact gaaaagcagt gtttagacat 660 tatttatttt tatttttgag atggagtgtc gctctgttgc ctcagctgga gtgcagtggc 720 gggatctcgg ctcactgcag cccctgcctc ccaggttcaa gcaattctcc tgcctcgagt 780 agctgggatt acaggcgtgg gccacagcac ccggctgatt tttgtatttt tagtagagat 840 agggtttcac catcttggcc agactggtct caaactcctg acctcaggtg atccgcctgc 900 ttcggcctcc caaagtgctg ggattacagg cgtgagccac cccacccggc ctagacattg 960 tatttttata tcacctttca caacctcaag atgettttgt gtgtattatg ggattgtatt 1020 tatggccttg tccctgcatt gtggatgtca agggccagtt gccacgtgct tagtcatata 1080 cctaaactca gggaacacac acacgcatgc ttatggactc acacacactc acactcttac 1140 ccacactcat tctagccaca ctcacactca tatatactca ccaatacgct cacactcaca 1200 catateetta cacacecaca eteteacata ecettacaca eccacacace ettacacaet 1260cacactcacg gtagccacac tcatgtataa ccaatatgct cacacatgta cccttacaca 1320 cccacactca tactagccat actcacactc atatatactc accaataagc tcacacacat 1380 accettacae acceacacae egeettacae acaeatacte gtacaegeee acaeacaece ttacacacce acacacatac cettacacag ceacacacat accettggac acceacacte 1440 1500 actctagcca ctcatatata ctcaccaata agctcacaca cacatagcct tacacacaca 1560 tccttaccca catttacaca ctcataccct tacactgtca cactcacatg tacccttaca 1620 1680 cacaccttta cacacccact cacacacata cccttacccc cacacaccct tatacaccca

1740 cactcacact ctagctacac ccacactcat atatagtcac caatatgctc acactctcgc 1800 acteacatge tgtegtgete geteacatae egttgeacae teacatgete teacacaete 1860 tcacggtgaa atctgtgcct gccaccacac tcaggttgcg atgtgtgttt cacttttagc 1920 tcctctaagg ttttactcac ctggctccac caaactggat tttaccatag tctatactta 1980 aatactgttc atctcttctt ctacacaaaa gtattaagaa tttacctgcc tgcaagttat 2040 tggaatatcc tgggcaaaag caaataaaac tttccctttt cccttgtttg acaccccctc 2100 atcagtgacc cccacgacac gaccccacca ccctatctgg cttggcatgt gatgcttcag gaagggcaca gggtttccac ggctcctgtt accctcttaa gcctcagaaa acattggcac 2160 2220 aggcagagag gagagctgtc atctgagtct ctctgtggga tcctgggctc ttagggaaag 2280 gccagacagg gaggggcggg agagatttct gtggcctcca agattcctgg gaaggcgaag 2340 tctggatttc cttggagggg aaggaggct taggccagcc acataattag ggtgcagtag 2400 acaaacagaa atcatttctt ttggtccctc atctgcctca aggctgtgtt tgctccacat 2460 ggccgcacag gcacttgcgt ctgtgccctt tggggctggc agagatggag gagaaagcct 2520 taagcaccat ctctcctgat tagcgctcca cgcagcttct cttcacagcc cctcccacac 2580 actgtgtccc actactcaga cacatgggcc gtgggcacag agggaaaggg accttgggaa 2640 gaatagggag ccaagccact cttcaccctc ccaggtgtcg cccatagtgg ggcacatggg 2700 gacacggtgg ccactcaccc cctgccactg agtcccacag tgcagctggg cctgtggtca 2760 gatgccacag ggacaccata gcacccgtag agtgtgtcat ttccttggtg cacgagggcc 2820 ggatgatgtc cccagaggct cactggcttc ccacagcaca gagggacctg gcaccgctac 2880 cctaagatgg aattgttaaa actacctcca tttttatttt taaaagtatg atgtcaatgc 2940 ataaaataaa aattgctttc tgtcagatgc ttctttattc aagcccctaa agaaatgttt 3000 tettgeetaa gacageteat attaaaatgt etaaageeea agagaagtet aataaattte 3060 agctttatga ctttgtttac tctgggtgta gaaaaagaat tcttttatac gtagcctagt 3120 ttccagaact tccagggtca aaagttaaca aatttgggga aaacagaaga gaaaagatag 3180 catacagtat tctgttttcc tattaaaatg aggaaaacaa aggagtcatc agaactataa 3240 tttacgggaa agtgtgcaga catccatctg cttttattga aaaaataccc tgcagatgtt 3300 gggcctaatt atgaatcctc cattttcttg atgaaaaact ttagtggcat ctcaatctct 3360 gatcggtaaa ctgggtgtcg tagcacttac aaaatagaat tatttcattg atctttagcc 3420 atctattatt tttttgtaga tgagagagca ttcagcatga aggctgtttc tatctgaata

3480 ctaaatgttg gtttcattcc cacaggttca cagcaaacag gattcctaaa tgcccttaag 3540 gacagtectg caagegteet ggaggetgtg gtgtgettet tetetgtetg gtecategtt 3600 ggcctctcag gattccacac ctacttgatc agctccaacc agacaacaaa tgaggacgat 3660 tatctgcctg cacttaatac agatggagag gaagtatgaa aataggaaac aaggccgggc 3720 gcggtggctc atgcctgtaa tcccagcact tcgggaggcc gaggcaggcg gatcacgaga 3780 ttaaaggatc ctggtcaaat aaaagaggta aagaaaatta caatccctac agctacggaa 3840 atatetttae caactgetgt gttgeeetgt gtgggeeeat etcaecaage etgategaea 3900 gaagagggta catccagccc gacacgccgc agccagcagc accctccaat ggcatcacca 3960 tgtacggggc cacgcagtca cagagtgaca tgtgcgacca agaccagtgc attcagagca 4020 ccaaattcgt tttgcaggct gcagccacgc ccctgctgca gagcgagccc agcctcacca 4080 gcgacgaget gcacctgccc gggaagcctg gcctgggcac gccctgcgcc agcctcacac 4140 tgggcccgcc cacaccgccc gcctccatgc ccaacctcgc cgaggccacg ctcgcggacg 4200 tgatgccccg gaaagatgag cacatgggcc accagttcct gacgcccgat gaggcgccct 4260 cgcccccag gctactggcg gcgggcagcc ccctggcgca cagccgcacc atgcacgtgc 4320 tgggcctggc cagccaggac tccctgcatg aggactctgt gcgcggcctg gtgaagctca 4380 gctccgtgtg acccacatgg ccccaggccg ggggacacca gaggctcctc catgggcagc aggagtgagc ggaggggtgt gtcccacagc gactttccca gccaatgcca cggtggagat 4440 4500 gacagcccca ggtctggggt acagagacca cttaggatgg cacagggtgg ctggccccgg 4560 atgctgagag cttggtttca tttgaatttt cttccccaac ctgagtgctt tgacaacaat 4620 ggaaatagag aagtggctgc tttcttttgg tgaccctcca ggggtggaat cggagtgtgt 4680 ctgcccgccc ttgtgacaga cacacggaag gcttctgacg cttgtggcca gactgcaatt 4740 4800 aaaaaaaaaa aatcctaaag ggaaaaaacc gaccaggtgt ggatctgcat gccacgctgc cgtctgtgtt acagtggtgt tgctatttcc aaggaagtgc tgctttcttt ttctttttt 4860 4920 aattttgtga attttcaagt gctgttttgt tggaagacag tgcaacgaac tgagactaat 4980 ggacagtgtc atcactcagc ttactgggct gaggcgtctg tggagaggtg gcaccggggc 5040 tgcagagggc ggctggggtt ccgtcgtgtc gggtgtcact tcaccttctg tttggccgct 5100 cgatgaggtc tcgtgttgag atattgtgtg ccacaacccc cacagtcttc acctccgtgt 5146 gtgatgaaac ttcccgtgga cagccaataa aatgacgtcc tctgtt

<211> 3425

<212> DNA

<213> Homo sapiens

<400> 165

60 120 gtcctgcaaa tggcctttca aagtctagac atcttcatca tcaacacaaa cattcctctt 180 cacaaaggga cctcaagtaa ccttaggctg gagggcccac ctgcgtatgt ctttcttctc 240 attettett acettecete eageecacae aacteacatt eagtgaceaa gteacgtagg 300 ttttacctcc taaatctctc atatccttca ctgctcagcc actctcctga caccaccata 360 aaccaggcca ccatcacctc cagctgtttg actgcaaatg cctccagact ggcctctgct 420 tttccctggc cctgtgacaa tctgcactcc tcacagggac caaagcaatc acttcagaag 480 gtgcatccaa acagatcact caactttcaa tggctccctc tgctgtgtgg gttaacaatg ataaaagctc ggccgggcgt gggggctcac gcctgtaatc ccagcacttt gggaggccga 540 ggcggtcgga tcacgacgtt aggagatcca gaccattctc cctaacgcgg tgaagccccg 600 tctctgctaa aaacacaaaa aaattggccg ggcgtggtgg cgggcgcctg tggtcccagc 660 720 tgctccggag gctgaggcag gagaatggcg tgaacccggg aggtggagct tgcagtgagc 780 cgagatcgcg ccactgcact ccagcctggg tgacagagtg agattccatc tcggaaaaaa 840 aaaaacaaca acgataaaag gtcacctttt ctgagcacac actatctcag tccatcccta 900 catcagccct ttatttcacc agtggggaag ctgggacaga gagtagttac gtgggatgcc 960 caaggtggga ccactcgtgt gaagtttcca caccctaatg tgagaccctc tatgacctag 1020 cccctgtctt tctccagcct catttcctga ttctctcgct tgccctgcag gcttcagcca 1080 cagaaacttc ttgaaagtcc cttaaatctg gctgagcaaa gtggctcacg cctgtaatcc 1140 cggcactttg ggaagctgag gcgggtggat cacctgagat cgggagttcg agaccagcct 1200 ggtcaacatg gtggaacccc atctctacta gatatcccag aattggccac gtgtggtgga 1260 eggeaectgt ectagetget egggagaetg aggeaggagg ategettgga etegggagge

1320 ggaggttgca gtgagccggg atcgcgccac tccacccaag cctgggcgtc aagagtgaaa 1380 gtccgtctca aaaaaaaagt cccttaaatc tgctgtatgc ctatcaacct cagggacttc 1440 actatgctgt tcctcaccct gaaatgctgt tcctcatttc tccacatagt gaactcatcc 1500 cacccctag gcctctcctt aagtgtcatc tcttccagga agattttact ttttttaata 1560 taactattaa aatataatto aggtactgta tgatttgcca atttaaagta aacaaatcaa 1620 tggtttcagt gcattcacag agctgggcaa ccaccatcat gatcaatttt aaaacattgt 1680 catcacccca aaagaaaccc tgtatctatg agcaggtacc tgccatttcc tcctccact 1740 aagccctgac aatctacttt tttgagatgg agtctctgtc acaggctgga gtgcagtggc 1800 geggtetegg eteaetgeaa eeteegeete eegggttaaa gegattetee tgeeteecga 1860 gtagctggaa ttgcagggct atgccaccac gcccatctaa ttttgtattt ttagtagaga 1920 cagggettet gtetteatag atttgegtgt tetggaettt teatataaat gaaatettat 1980 aatatatgac cttttctgac tagtttcttc tacttagcat aatattttca tagttcatcc 2040 gtgttgtagc acgtgttagt acttcattcc ttttgatgac tgaataatat tccattgcat 2100 ggtcaaacca tgttctattt ctccactcat cagtagacaa gcatttgtgt tgttttcact 2160 ttggcgctat tatgaataat gctgctatga gcatttgtgt acaagtttct gcacggacat 2220 atattttcat ttgtttcata aactggagtg gaagtggtgg gtcatagaac tctgtgttta 2280 agcttttgaa gaagtgccag actgtgtaag aaagaaagcc tttcctcacc ctgtgagact 2340 gageteecte tetecattta taeattetet ttatgeeett tgettetett teagageaat tcactttgac ctgggtcacc ctcaacttaa ggctcataac tcccctagat cctcagggtc 2400 2460 cacactaaat gtgatgaaat atgatgcaag ccacatattt acttttgcat tttgtagtaa 2520 ccacatttta aaaagtaaaa caaaagaagt gaaggtaatt ggaataatat cagagattta 2580 aacaaatcta teegaaatae eaggtetaea agtataaaat attttaacat taacaaaata 2640 ctttgctttc tttttatatt aagtettttc aatetaatgt gtatttgaca cttctcgcac 2700 atctcagaat gatggcagca ccccatatgg ggggccctcc catgatgcca atgatgggcc 2760 ctcctcctcc tgggatgatg ccagtgggac ctgctcctgg aatgaggccg cccatgggag 2820 gccacatgcc catgatgcct gggtgcccaa tgatgagacc tcctgcccat ctcatgatgg 2880 tgcccagtca gcccagaatg actcgaccag acagataagg atagagggga ggcctcatac 2940 atcagtgttg ttttgttgtt gttattgttg tgttttcttt gtttgtaatg ttttgtttta 3000 tttttgagac acaatcttcc tctgtcgccc aggctggagg gcagtggcac gatctcagct

3060 cactgaaacc tccacctccc gggttcaagc aattcccctg cctcagcctc ctgagtagct 3120 gggactacag gcgtgtgcac catgcccgac taatttttt tattttagta gagacagggt 3180 ttcaccatgt tggccaggat ggtctcaatc tcctgacctc gtgacccgct cgcctcagcc 3240 teccaaagtg etgggattae aggtgtgage eaetgegeee ggeetatatg agttttatat 3300 ttacctgctc ccttcaccag gagatcatgc tgctgtgatg ctggcttttc ttaacagcat 3360 aaggaagact tgtccccttg ccctatcaaa gagaatagtt ttggagggga gaagtgggac 3420 caaaaaagat gcagtattca tttctattgg gaaatatgaa aataaaattg tcaactcttt 3425 tagtt

<210> 166

<211> 4983

<212> DNA

<213> Homo sapiens

<400> 166

aacggcaagt gctcacgggg catgggtgat tttgtctagt ctggtccttt tggacgtggt 60 120 gatttcctgt catcetcgtg gtctgacatt gcttctcact ggatactggt tgtggccttt 180 gactcattag ctgattgttg gatctctttg tgaggttcga ttttttaaaa atccatgggt 240 ccctatggac tgtcacctgt tgcagatgat ggtgattctc ttcttttttt tgtctccaat 300 agttgcctgg acgacttcat gggtcagtcc acatgattgc aggatttccc attgctcatc 360 tgtgaatgtt gattggccaa cctgtctgag ctttcagcag atgcatcctt gagcttactt 420 tcaggaattc ctcctggaat tggttttcct tggtggtaat ttctcatggt ggagcttgtt 480 tetgaggeat ggtacagtge tgeggaggea aggeaagget gteatggtga ttttcacage 540 atctggatgg caaattgcct tcacgtaggg aaaccacatg ggactgatag ctttctcaag 600 ggatctccaa gcatctctga atttggggat ttcatcagtt actcctggaa tcaaaatgag 660 tgtggagtca taatatatat tttttttggg acagagtctc gctctgtcgc ccaggctgga 720 gtgcagtggt gcgatctcgt ctcactgcaa cctctgcctc ctgggttcaa gtgattctcc 780 tgcctcagcc tcccgggtag ctgggattgc aggtgcgcac caccatgccc agctaatttt

840 tgtattttag tagagacgga gtttcactat gttggccagg ctggtctgaa actcctggcc 900 tcaggtgatc caccacctc ggcctcccaa agtgctggga ttacaggtat gagccactgc 960 ccctggcctc aaaatcttta aggaagttat ttatcgtcac aagtgttgtc atctgtgact 1020 catgggccac ttgatgaacc tgaaccatta gtggttgtcc agatcctcca actttttcag 1080 gcagtattcc aatcagggtt ttacgacacc agggtatccc accttttttg caacataggc 1140 agaaacacca agctgtgggt aattgatgtg cgtgtcactg attcctgcaa cagctttgaa 1200 tgtattaaat ctgttttcaa cagcccttgc ataggtgtta tctctcaaat ctctgtaaag 1260 agcactaaga gtatgtagtg ttgcatgata taatccaagc ctgtgggctg tgtcatccgg 1320 gattgttgga attttgcatg tgtctgttcc atatcccgct ggtaaccagc ttacagacct 1380 tctgtcaggt tggcttacat tatcatcaac aggttgccgt agtgatgata tgatgctgga 1440 cacaatcatt gtgcactttg ttaatttggt atggtggtgc cacacattat cactgtacag 1500 cattaacaag gctggaatat ggccctctgc tgtagggggc gtggcacctg tgacttgcac 1560 tggaataagt aggaggcttt ccccaaagga tatggagact gatgtgtgct ccatatcttg 1620 aggggagctc tcttggtttc ctttggccgg gtctgttagt tacttttgaa ggccatgcca 1680 accettttag gecattaaat tttteteaaa caatagecag ceteatttet getteatete 1740 tgtggtagga accattecet actettacte ceteetettg tecaacttee accaaacact caatccgagt cctggctgct ttcttgctta ggtctgtggc tggtaactgt ggtgaaagag 1800 1860 tcaaggtggg cagtgtttgg ggtaggaaat gagtagtggt gaagcagcag cagtgtgtgt gtgggtgtgg gtgtgtgtgc atgcgtgtgc atttgcatgt gtgtatgttg acaaatgaga 1920 1980 gtgtagccat aagatttcat tgttactact agtctttgtg tacctatctg gagggacatt 2040 aaaaaaatat ggccattctc ccatctaggg ggttcccatc tcagacttct ctgataagag 2100 taatttgaga acaaatacag attcatctat gggaaaagat gtttaaactc agcatgaagg 2160 agaaacaaat ttaggagtgg aaagcaaggc aggtagttag gtgatttcca tgaccacatt 2220 tgcttgggcc agggaagtgg tgcacctctt ttataacaat gggagatttc agaaacagtt 2280 tgagtgttgg cagaccaatg ccctgataag cttgtggtat agaggtagga agggagggag 2340 gccagagatt agataaaatg atggtgggtg ggatcttagc tctaaatgaa aagaactgga 2400 cttactaagt gggtggatta cttgctagcc ataactttta gggaagggta ggtctggaga 2460 gaaggtgaag accagcagaa atatactgtg aaattgccaa atatgtttgg ttgcagaaaa 2520 cacagectgg ctctttgtgg ctagatgtga cttccaactt ctgaagacag gattgccaag

2580 agatgtgatc tttccacata cagctcctgt ccccatctct ttatgtgtag agacctggat 2640 ttggggtagt ggggtagtaa accatatatt tccaaaagat ggtgtgaaga gtcgtttctc 2700 ttcgtctggg atgtgattgg cttctgtttt ttgttttttg tttttgagac ggagtctcgc 2760 tctgtcgctt tgtcaccagg ctggagtgca atggcacaat ctcagctcac tgcaacctcc 2820 gcctcctggc ttcaagtgat tctcctgcct cagcctcctg agtagctggg actataggcg 2880 cgcaccacca tgcccagcta attittgtat tittagtaga gatgggatti caccatgtig 2940 gccaggatgg tcttgatctc ttgacctcat gatccaccg ccttggcctc ccaaagtgct 3000 gggattacag gcttgagcta ctgcgcccgg ccagtgattg gcttttaaat taatcacaaa 3060 tgtttgataa aattctggta tgtgctaagt cccaggcttg gttgatatct cagactatga 3120 tagctgtgac cttcaagaaa tttctggctt ggggaatctg tagtttctgg ttgtccaaaa 3180 aagatagttc ttagtcctac tttattttct acccactcaa ctctccagac ttccctctta 3240 gtaaaggaat tcataattct ccctgcatct tctctgttta tttcaatgtc catgttctga 3300 gtctcaagtt ttcctgaagc acaggagcag gcttggcccc agagcccctg gctttttcaa 3360 cgagcatcag aaatgctatc aatatattct ctctgttgct ttatcagttt ctctaaattt 3420 attttgtaag gaagttagca cctccttcca ggactttaaa cagttgtctt tgccaatttg 3480 ttcctggatt ttccttgaac ttctcaggtt tccaagccac atcctagcag ggcatccagg 3540 agccttgcac tgaacctctc agctcttttg actttcttct ggtcataggt gttgggcctc ccattaggta gaagtccttt gagcagaccc gaaatggcca aatgagacat catccaagtt 3600 cctccctcct ttactgtctc ggctttttca agcacccctt tcacctctct tttctgcctt 3660 3720 ttcctcagtc tgtcaagttc tttggaggaa agaagttctt ggtcagaggt cctaaaacca 3780 ccaccagctg ggggtgctga gaatggtgag gagttggaca gtcccggggc ttttttgaaa 3840 ggggacttta tggtcatttc ccctgtttag ggtgagggac taagaattct caagccttca 3900 gtttcatcca tatttcaatg taagcagaaa agcacatctc aaagccaaat agaaatgatt 3960 ttctactaag cctatccttt gtgattcttg gttcccttgg tctcttaata ttaattatag agaatgggca gttgagtcag ttaacatctt ttcatcagaa aggagggtaa tattcataac 4020 4080 caaaagagat gtaaaggaag tatattactg cttgaagtgt gaaaagagga aaggagtgtt 4140 atgtgaacct tttcagtagg gaaattcaga aaatggaatg attcatccat aggcataatt 4200 cttttaggag attctgtgct caaagggaag ggaatggttt ctgatccttc tgaagagaaa 4260 aggaatagca tttttcttaa acctaaccca gtttcagcat tggagaatac agaacttttt

4320 cttctagctg atggcattaa tatttcttga gagagagaac tcacccatgg cacttttctg 4380 agcccagcag aaatcagcgg agcttgggct tcgcttagca ggtttgcaat tgacttcaac 4440 atgcaggett tteacatgtg caataatget ggaaacagaa geaccaaact gattgtgeaa 4500 ttactccttt tgtagaagag gccaaaatcc tcctcctcct tcctttctcc tatattcact 4560 cctccaggat cataaagcct ccctcttgtt tatctgtgtc tgtctgtctg attggttaga 4620 tttggctccc cttccaagct aatggtgtca ggtggagaac agagcaacct tccctcggaa 4680 ggagacaatt cgaggtgctg gtacatttcc cttgttttct atgttcttct ttctagtggg 4740 tctcatgtag agatagagat attttttgt tttagagatt ccaaagtata tatttttagt 4800 gtaagaaatg taccetetee acaeteeatg atgtaaatag aaccaggaat aaatgtgtea 4860 ttgtgataat cccatagcaa tttatggtaa gaacaagacc cctttccctc accaccgagt 4920 ctcgtggtct gtgtctgtga accagggcag gtaattgtga cactgcatct catagaactc 4980 tgcctgccca gatttttgtg tgctcacctc aatgggtgaa aaataaagtc tgtgtaaact 4983 gtt

<210> 167

<211> 4000

<212> DNA

<213> Homo sapiens

<400> 167

agtgttatga tgcagttcca caacacacag ccacattcac ccacagaccg aggagcggaa 60 120 agagaagaga gaagagtgag cagagagatt gagagattga gagagagaga gagagataga 180 cggagatete tggageagae etcaaggtga gggggeagee etteteeaaa tgaattttt 240 tctctttgca aatttcctcc tcctgctgcg tgttgctttc tcccctttgc aaaagcatta 300 ttcatccacc ctttgtcctc ccttcccct cccgctgcc tccgctcctc tctctcggtt 360 cetecatece tetecaaget etgacgatte eegeacttat tteeeggeaa etttggetge 420 agcatcagge atcactgttt attgttttgc tgctggtgca gacccccaaa gcctgccctg 480

540 gtgccaaaac ctcagagcag atgagaaaat ccattgtgag caggtgtccc ccccttttc 600 ttttccccc tgagaagcac gagattcgca cctggttcct ccagcctccg cctcggcgcc 660 tetgetgtea getgteagtt geccegeca gecetecete teccetttet cetaeggtee 720 agccccgtct cacttcaggg gaacatctct ccccagcact cggcttgcct ttgttttttc 780 tccagtcatt tgcccaactt gcttctcct gtgatccgag atgggtgaaa aaatgaccc 840 tactccctt tgtgattctc tggccttctg tgcagccttt ccttggcttg actgggaatt 900 aggggagagg gagggaggcg tgacggccgg aggctggaga aggagctcag gattggggac 960 ccaagetgcc ccatteteca tgcccettga agaaggtgtt tcaaggtggt gcatgtcaga 1020 ggggaactcg ctggcaaagt tgaaggcaaa cctgtgaagc agagactgaa aggtggtctc 1080 ttggcaagga gggcccgttt cctgcagccg gagcccaatg tcaccctgaa ctcagcccaa 1140 ggtgtcttcc tgggacccag cccggaggag aggacctgaa actgaagata gtctctatgg 1200 aggttttgcg gagagactgc ctggcggcct tcagagagag tggaacagct gggtgcctgt 1260 ggccactgcg gaggacagga cgaggagagc ctgtatgccc tggctaacca gagccaacac 1320 tgcctcttct ctgcttagtg ctctagcatt gccagagtgc ccagctggca tctctgaacc 1380 agacttaggc taaccaccca cagtgggctg ggaagcccta tgaaggagaa agcagcagct cacctgctta tcggagccaa caggggccac ctcccttctt atcctctgcc tccagcacct 1440 tcagccactc ggaggctggc gcgtgggcag aaggcaatct tcctctattc ctaatcagaa 1500 cccagcaatt acttcatctt cagtcaccca cagagtcact gctgtttgtc cctgccctg 1560 ggagaaggta gaaagaaaca ttttctgcct tgtgccccaa agcacagctg ttaaaaaataa 1620 1680 gagtececet tetgetgtte gttgtggeeg ttgeteteae eetaecaeae ageeetgeee 1740 ageccaggaa teaggeteet etgacatget acceatttee cattggetee agetgteaga 1800 ttgcctgaag aaaatgtatt ttctgcctaa gtctttaacc aagggctaag gcaacagtta 1860 gtaaagacta ggagagagaa agaccaaggg gcccacaggc tgggaagaca ggcaggtgct 1920 tattctgggc cagaatgagt gaaccaaggt gcgagaatgg gcggccacac gtgagggctt 1980 tggtactgtt ggaaacatct ataaagttct agtgaagagt cccagagcac aggaccctga 2040 cctcaggaga gaaccgaatc agggtttgta tacctgcctg catgctctcc ctcccctcac 2100 cttacacctc ctgccccct ccccaaaatg tataaaggac caattgtatt gcaaacaaag 2160 accatgtaaa agaaagacct tcaggcatcc ccaactctta aaaggctctg atcccctgag 2220 acacagtgcc tgtgcgatgc agagcctcac gaagaactga aaaccaagga gagggcactt

2280 gcagatgacg ttgctcccat ggcagcgtct gtgcccgtgg gcttctctct gtggaaaatg 2340 gtggaggctg cttctgcccc aggagggaga aacaccgact ccctggcttt ggcgccagaa 2400 gcctggatcg gctgccaggt ttgccagagc agaatgggga tccaggggac agggcgacaa 2460 tgcaactgga tgctgtgggg gggtcgatgg tgatggggaa agtagaggta tgggtgagct 2520 gattcccttt tcctccattc cctcaggagg ggtcctcctg aggtcgcagc tcccctgatg 2580 teettteece tetteecagg tgaettetat ttetatetgg ttetegtetg ggggggeeet 2640 ggccgggcag cccccaaca cttctcctgc cctgaaacac ggctctagcc aacctgctcc 2700 gctgcttcac ctgcgaccgt ctctgcgggg gctgcacggc gccagcccct ccagcccacc 2760 agggcattgt cctccagccc gtcatgccca gctgtgaccc cggtccgggc cctgcctgcc 2820 tecceaceaa gaettteege agetatetge eeegetgtea eegeaettae agetgtgtee 2880 actgccgtgc acacctggcc aaacacgatg agcttatttc caagtccttc caagggagcc 2940 atggccgagc ctacctgttt aactccgtgg tcaacgtggg ttgcgggcca gctgaacagc 3000 gcctcttgct cacggggctc cactcggtag ctgacatttt ctgtgagagc tgcaaaacca 3060 cactgggctg gaaatatgag caagettttg agacgagcca gaagtacaag gaagggaaat 3120 acatcattga aatgtcacac atggtgaagg acaacggctg ggactgaggg gctcaggcag 3180 ggtgtgccct tcctccgcat gcccctccct ccccacggcc ctgccaagca gtctatacca 3240 gcatgagtac tgccccaccc ctgggggaaa cctggctcca accaacccct cccctgcctc 3300 caccatatcc actaccaggc accetttaga acaggggtct gggggtaccc caggggtgtt 3360 aaggeteagg agtgggeage agteagggag agacagaact gggggaaagg gatggttgtg 3420 ggtctttctg ttcccaagat cctgaacatg gaagcgatgg cagggcatag actcaggcag 3480 agaggattgt gggaggaatc cgtttttgct ccacctcttt ttgagtgaac agaggacaaa 3540 ccttgggtca cagggcaagt agatcatgga ccacagaaca gcagatgaga aaagacttgg 3600 gttggagtga aattctggtc tcagacacca ggagaccaga gtctctgagg atgaagtttc 3660 ctacccctat ttgtagggaa aaggacttga gtgcagggaa aactcaaatc ccaggccctg 3720 ggaaatagta aaataatcaa agggttttcc atttcactcc acttgttagt ttatcttggc 3780 3840 cgcggaacag cccctagtcg gctgcttcca gagtaagcag tctttatggg ctttctctga 3900 ggcccagtca ctgctcctgg gacccagtcc cctggagggg aggtggaaaa tcagtgctac 3960 ggggccagtc tttcccgtgg ctgccaccag cgaatgaaac ttttgtatga tacataaagt

gcttgagtct atttttaata aaaagggaaa aagcaacttg

4000

<210> 168

<211> 5057

<212> DNA

<213> Homo sapiens

<400> 168

60 ctataaatag aattgttttg taacttttat tttcaggttt tcattgctag tatgtagaaa 120 tacaactgat ttttatagat ggatcttgta tcctgcaatc tactgagttt atgagctctg 180 gggatttttt ttgtggattc tctagggttt tctgtatatg gcaaatcatg tcatctgcaa 240 gtggaggttg ttttactttt tcctttccaa ccacgatgcc ttttatttat cttttacttt 300 tatttttatc ttttcacttc ccgtcccact gcaggacttt catttgtttt tctcgcctaa 360 ccgccctctc tggaactttc aatacagtgt tgaatacaag cggcaagaac agacatcctt 420 gtctttgttc tgttcctgat cttaggagga aactttcagc ctttcaccat gaaggatggt 480 gttcactgag ggtttcctgg aggcgccctt tatagggttg agaagtgccc ttctagtcct tttttgtcat gaagaagggt taaatttttc aagtgctttc tttttctctt ttgagatgat 540 tattgagttt tgttctgtta ccatgatgtg ttcatagatg taattacttc cattgataga 600 660 atatattaat atggtgttga tttctgtatg ttgaaggaac tgtgcattcc tgagatgaat 720 cccggttggt cgtggtgtat gatctttctt atacgctgct ggattttgtt tgctggtatt 780 ttgttgagga attgtgtgtc tgtattcata agagatactg gtcagcacac ttctttcctt 840 gtaacgtttc tgtctgcttt tggtgtcagg acctcattct gtcctcatag aatgagttag 900 aaaatgttcc cttcttggtt cttttttctt tagcatttct gtttttgtgt tgaaagccct 960 gtgcctggag tcactatcat catattttcc tttaattctt tggctcattt acggtagccg 1020 ctctggagtc cttagggaat gcgatctggg ccgcacagcg tgggcctctg ccatctgccc 1080 ttttccctga gtgtggtcac gcttctgttt ctttgcttat cccataattt ggggctgcaa 1140 tctggacaac ctgggtactg tatttgtccc agcaagtctg gattcttgta tttttatcta 1200 aggttgtttg attggttttt gtttgcttgg gtattttacc tggacctaag ctggagaatc

1260 tgtgtccacg gcagccgcag atgtgtccgc tcatggtttc tgctcttttc ttgttgagct 1320 gagatgtccc ggggtgtccg cctgtcttta cagctcagcg gttggccgct gctctgtctg 1380 tggttgtgct ccaacaccac gcatccctga ggctccccat ggccaatgat ctgtgcatgt 1440 ggggagccga tatccagtca gttcctggtc ccctgtggca tcacttctgt ggccgcgctg gatcccctg cacaggcctg tgctgcttct gtcggccagg gttccaggga agctgcctct 1500 1560 gtctggctct cttgttctca gcatttcccc gttatttttc tgactggtcc ctgccctcct 1620 tacccctccc cagccaggac tgtgggcctc tccaggtcct gcagatggac ccctcgtggc 1680 tgatgaaagt gttcccctcc caccttgagc ccaccccctc tggaagcaag gctgctggtc 1740 1800 ggagcagctg cttatatgct gctggatttg gtttgctggt attttattga ggaattttgt 1860 gtctgtattc accctcaggc tgggaagcca agtcccgctc ctcccagagc tgcaacggga 1920 tttcaggagt cagtgtattc tgatttcagg agtcaatgtt ttctgatttg ttgtctgcct 1980 tgaattgatt tccagagtcc tgaatggttg tttctaccat tttgtccagt ttcgcacttg 2040 gcttcgtaga gataactcat tgatttctac tccactgtag ccagcagtcc tcctcaacaa 2100 gcactcattg aatgagttgt tgaacggcag gtcctggacc cctcacatgc tggagtggca 2160 ggcgggccgt ctgtgcgttg tctgcgctgc agactcactg agcagtgtgt ggggctgtct 2220 gacctgtcag caggggcgca gggcgctcac tcttcagtac gcggtcccct ccagaacaca 2280 gcacagtgga tctggcatca cagggaaaca ggctgctggg catccagatg gtgaaattta 2340 ctctcttcaa atgtcagcat gtttcagtta aatttttcaa atggacatct ttgtgaaaca 2400 cattaaatag cattactccc ctgaatggag accgctgcgc cggaaggtgt tgtgggaatg 2460 ggttatccct ctggtcacct gcttcttagt gggactgaaa catggcgccc ccttggcacc 2520 ctgaggagct cctcccacct caaggctgct gtgctctcga gagctggcct ggctctgggt ggctttcagg ccttcctcta gcatccctgg cggccccttt ctctgagtca ctgctcttca 2580 2640 ggatgatgcc tggtgtgact tgattctcag cagaacctga aggactcctc aggattctcc 2700 aagccctgtg ggacacacag cgggctgatc ggcaggggtc tttcgggtct gagatcccat 2760 ggcccacact tggctctctt gagcactgct tgccagaccc tgggtgaatt gttggcctct 2820 tgggtcctca gtctcttcat ctctgttgat aatagttatc ttgaaaaaatt tgcattgagt aaataggaaa caatttettt ttttttttt ttttttttg atggagttte getettgttg 2880 2940 cccaggctgg agtgcaatgg tgtgatctca gctcactgca acctaacctt agcctcccag

3000 gttcaagtga ttctcctgcc tcagcctccc tagtagctgg gattacaggc atgcgccacc 3060 acgcctggct aattttgtat ttttagtaga gacagggttt ctctgtgttg gtcgggctgg 3120 tcttgaactc ccgacctcag gtgatccacc tgccttggcc tcccaaagtg ctgggattac 3180 aggeatgage caccacacce agcetacaat tteaactgae catacagtat tgageataag 3240 ttacttaaca aaagatacct gccatcgtta ttatttgtgg ttctgtgtgt tcaatgtaca 3300 gggttttgtt ttaatcactg gtgtgaggct gacggatgag gaggcaacgg ctatgaggaa 3360 aggagtttcc actcatagtt ccccagagac ccccagggag ggagtgaggg gagacctagc 3420 accttggttg tggttctcat gggaggatca gacagggtga gtggaacagg ccgccaggct 3480 tggggttggc tctgaacacg ggctctggat ttgttggctt tcatatcaga agtgtgctca 3540 ccgtggcctc ctgcctctag gaactggctg tccctaggag ggcagtctct gcagggtcca 3600 caagcctcca gatgccaaac cgtgatacaa ggcagaagtg aaggcagcat tcacacagcc 3660 tagtaagaca gctttccttc ttgctcttag ctgttctttg gagccttctc agggtcacct 3720 gcagactgag gagttacgat gcctcccgca ggcagcatcc tcacaaggtc tgcacagccc 3780 cggggcaaag acaagacccc tgtcgggggc acggaggctg ccttgtgctc ggggcctcct 3840 gccccacaag ccggcaaccc cccgacgtgc cgcagcaggc agggcactgg ccagtcacag 3900 tcactgcgct ggggaagcct aatgcttggg ctccctcact gggtggcttt cccatcctgg 3960 ggtccaggag caggtgttgc ttgagaactc agtcgtcaca tctccccttt catgttacaa 4020 ggcgcctgga gaaagcaaac acgggtgggg cactgaaaga aattctggac gcgcttttgc 4080 ccttccggca gttctcaggg tagcaggagc caaggcttgg gagaggcggg ggaggaagct 4140 cgtgctccag atgctcattg agtacctgtg tatgccaggc acagtccgca tgcccacagc 4200 tgccccgtg acgggcaggc tcccctcgca gagcccacgg gccgaggtcc cctcagtgag 4260 gctgaaactc agctgggact ggccagttcg tttccaggtc ttgctatcca gctgccgatg attcagatgg cttacatatt ctctaagctg cagaggtgca taaaggtaga aagattaaaa 4320 4380 tgtaggatat ttacgccctc atatggaaga cccagggctt ctcagagtgt cgtgttggca 4440 ccagggctac ccgcaaccta agaggacccc gcgtgcctgt gtggctctgc ttgccactgc 4500 cctcgtggca gggaggcagt gacagctacg gagaagctca gcaggctggc ctggtcgtcg 4560 tcctcaaagc accgtgatgt gttaacatga atgactcgtg ttttattctt gttccaccac aggeagegte tecteeeggg geeeggagea teeeggeetg acaaegagte agaggagegt 4620 4680 gggaaagcct ctcaggattc cacctctgca aattccctac aagggacccc cactaacgcc

aacaccacag	ttaccaggga	gagcaggaag	aggggactct	ccaagcttcg	ggggctccca	4740
ggccaggctg	ccccccggc	cgcccatcag	catctccagc	ctgctgcaga	gacagtgttt	4800
agtgtgaagt	tttgaagtca	tttcaaagac	aaagttgtgt	ttttaccgcg	acttccatgc	4860
ctcctgcggg	acctgctcac	cttggggcag	tgacacctga	aagatgagca	cccagccacc	4920
cgctctgccc	ccttccagtc	ctccagcctt	cgtgcccacc	agcatgtgta	cgttagacag	4980
ccagtgcgac	tgtactttcc	ctcttgttga	aataattaag	taatgtagtg	gaataaagta	5040
tttttctgat	tatcagg					5057

<210> 169

<211> 3673

<212> DNA

<213> Homo sapiens

<400> 169

tttttgtttg	agatggagtc	tcgctctgtc	gcccaggctg	gagtgcagta	gtgcaatctc	60
ggctcactgc	aacctctgcc	tcctgggttc	aagtgagtct	cctgcctcag	cctcccgagt	120
agctgggatt	acaagtgtga	gctaccatgc	ccagctaatt	ttctgtattt	ttagtagaga	180
tggggtttta	ccacgttggc	cagtctggtc	tcgaactcct	ttcctcaaga	gatctgcccg	240
cctcagcctc	ccaaagtgct	gggattccag	gtgtgagcca	ctgcgcccgg	cccggctgg	300
ttatttttaa	gatgggactg	aagttgaggg	ctgggctgca	ggaggaaaat	gagctccgtt	360
ctgatttccg	ctgttggaac	cccagtgcct	ccctcccagc	cactcttcag	ttcttggctg	420
cgagcagtag	ctttgctgtc	tgtccttggt	ttgctgtatt	tgtaataagg	aacctttgct	480
atgaaattag	tgggatacat	tggcttctcc	tgtctaattt	tgtgtagctc	tgtctacaca	540
gtttgggtcc	taacttgact	gctctggggc	tgctggtggc	agaggaccct	ggggcttggg	600
agtcgtgtct	gcggttgaat	cctctctgtg	ggaggtggcc	tgtggtgcag	ccttgtggct	660
tgaagatctc	tgatgttgga	atggttgctt	gtcagcacag	acagggcatg	aagtccaggc	720
tgcgttcctc	acatttagac	cattctcttt	gtcctgccag	gtgtaggtga	gggtgcacta	780
ggttggaagt	cgtggaaacc	cacccacctg	agcccaaccc	tgaagggcac	tgttgaggca	840

900 960 cctggtgggc gacttcgtgg gctttgtgtt ggaggtggct gctgcagtga ccttgggctc 1020 tgggctccct tgtttacaga tgcttcccgc agctctgacg gatgggcctg ctgttgctct 1080 gaggagggca cgtgtgccgc tgtgtcccgt ctgtctcagc acagtcacgg tgcgtgcgct 1140 gggggctgtg cagcagggtc actcctgaag gaaagtgggt tctccaccca gacagacggc 1200 tgctcccag tggggagctg ggggcagtcc tccaaaggaa ggctgcgggt gatgcaaagg 1260 gaaaaggaga gtgggtactg aacaggcggc tggtgagcat tgctaccaca acagggcctg gagettagge etcaegtgtt aggggatgea tateetgtgg agageeggtt agtegteeeg 1320 1380 gtgtgtccgg aattggtggg ttcttggtct cactgacttc aagaatgaag ccgcggaccc 1440 ttgccgtgag tgtcacagtt cctaaaggcg gcctgtccgg agtttgttcc ttctgacgtt 1500 cggaggtgtt cggagtttct tccttctggt gggttcgtgg tctcactggc ttcaggagtg 1560 aagctgcaga tcttcgcggt gagtgttaca gctcataaag gcagtgtgga cccaaagagt 1620 gggcagcagc aagacttact ggaaagagag aaagaacaaa gcttccacac tatggaaggg 1680 gacccgagcg agttaccact gctggctccc gcagccagct tttattctct tatctggccc 1740 cacccacate etgetgattg gtagagteea gtggtetgtt ttgacaggge getgattggt 1800 gcgtttacaa tccctgagct agacacaaag cttctccaca tcctcaccag attagctaga 1860 tacagagtgt ccacacaaag gttctccaag tccccaccag agtagctaga tacagagtgt 1920 cgattggtgc attcacaaac cctgagctag acacagagtg ctgattggtg tgtttacaaa 1980 ccttgtgcta gatacagagt gccgattggt gtatttacag tccctgagct agacataaag 2040 gttctccacg tccccaccag aatcaggagc ccagctggct tcacccagtg gatcccgcac 2100 2160 tgggtggtca atgggaccgg gcgctcgtcg gggagactcg gtccgcacag gagcccacgg 2220 agggggtggg gggcttaggc atggcgggct gcagctcccg agccctgccc tgcaggaagg 2280 cagttaagac ccagcgagaa attgagcgca gctccggtgg gccggcactg ccggggggacc 2340 cagcacaccc tecgeageeg etggeeeggg tgetaageee eteattgeee geggeeggea 2400 gggctggccg gctgctctga gtgccgggcc caccaagccc acgcccaccc gggactccag 2460 ctggcctgca agcgcatgca gccgcggttc ccgctcgcgc ctctccctcc acacctcccc 2520 gcaagetgag ggageegget eeggeettgg eeageecaga aaggggetee eacagtgeag 2580 tggtgggctg aagggctcct caagtgccac caaagtgaga gcccaggcag aggaggcgct

gagagcgagc	${\tt gagggctgtg}$	aggactgcca	gcacgctgtc	acctctcacc	ggggtggaat	2640
ttgcgtggag	gaacgtgcca	ggagggccag	ccctcgggtg	ctgacccctc	tgtcctggag	2700
gctactttgc	ctgcatctct	gccacagtcg	ctcatcccct	gcggtggggc	tgctgcggtc	2760
cagcacggcc	acaggcatcc	agttcccctg	tgggacgcct	gagtgcgggt	ccttgttggt	2820
ccgtgtgtga	gccgcgtggt	ggtttcacat	acttgatttg	aggaaagtga	agtgttctgc	2880
ttaggtcttt	gtctcagcct	aggaaagagc	tccattcctg	gcccttttct	gtgtttgtcc	2940
cactcaccca	ctgtcatttt	gagctcctgg	gccaaggttt	catggggttc	ctccctggct	3000
ccccgctct	gcctctgtgg	gaacactttc	tgcaccctcg	ggtctttgtt	cccattgtca	3060
gtggaacttt	gaacagagct	ggctggttca	cctcgtcatt	tcagcggtgt	ggatcagcag	3120
gcaggttctg	ctgttgactg	agtgttgggc	gggaggccca	gggcctgcac	tccctggctg	3180
gcgggctcag	gctctgcttc	ccttcagggt	ggcttggccc	accaggtggc	cttcagggtt	3240
ggccttgcat	gcccctgcca	ggtccgcttg	gtcaagcccg	cagtctcctc	gccgctggcc	3300
ccttctgttg	actgccctga	ccttccttga	tgactgggga	cagggtcttc	ctggatattt	3360
tcgtgtgtct	tcccgggcca	gtccagtgat	gcacttgtgg	atagggctgg	tcaatgtggc	3420
tgtggccaga	gagtggacaa	cagacatgtc	cacagcagga	gcaacatggt	ggcttgtctt	3480
gggctgctgg	ttcctggagc	tgctcagagg	accggtgggt	cctttcgagg	tgggcagcca -	3540
gcccttgccg	ttcaggttcc	cgcaggggtg	cgtgaggaac	cgtcggacct	gctcattagt	3600
ttattgactg	tgtttctggt	aatggcctaa	aaggttaaga	gaagaaatgg	ttaaaaaaaaa	3660
aaagaaaaag	aag					3673

<210> 170

<211> 3382

<212> DNA

<213> Homo sapiens

<400> 170

atgttagaaa gcgcgtagcc ttaggatctg gcagacccag gggccactta attaaccctt 60 tgcctctttg accctcaatc tccttttctc taagccatag gtcacctgaa agcctacctc 120

180 acagggctgt tgtgagggcc gagggtgggt gtgtttcaac agtgtgcaga tgctggcttt 240 ccctgggaat gggcatatgt tgggatttgt cttgaaagca tgagtgatgg ctttactagt 300 cctaagtgaa taaaaagtca gccctgacct tacgctggga ttgcatttcc cacagtcagt 360 ggcatgtgca gaccactggc agagcagcct gcaggtgctt agcgatgtgg gcccagagta 420 aatatttgtt tgattgatga gtgatggctt tttccttcct cagagtttgc cctgccccc 480 attecaaegt gggetgetge tteteeceag egggttgtag etggeaggge egttgtgett 540 tggggtttgc tgtacctgtc gctgccgtga ggggacgatc tgtctgcccg gaggggtttc tgcaaacatt catgtatgcc cctgctttcg tttgttaggg agaaggagtg gggtgaccta 600 gagagaggat gaggaagggg ttctgggtgg catccttggg gtaccaaccc tgcttccatc 660 720 ctgcgctctg aatttcctca cagccctttt ctgtctctgg tagaaggtgc agaaggtagg 780 ctttgccacc ttccctgggc ctggcaccaa gctcgggggt cttgtacaca ctttcccttc 840 tctaactggg gtgtgggccc atttcctaga tgagcttgct gagaatcagg acagctggta 900 tcagagccag gacttcccag tcttgcacaa acaacctgtg catttttgag tccaccaaat 960 aaggeeteet geetggteeg geteaeeeet geeageeeee ageaaatgea geetggtgeg 1020 tccccaccc tgccaagagc ccaggagtgc tctggcagag aagtgcaggg atgaggaagg 1080 aggetgtgee etceagggga etcagetgeg ttagaggagg tgetgetgea gtggeagggg tetecagaca teccaegeag gggteettte agateaggea tetetteace agaceaeegt 1140 attecttttt cagecetegt etettgeaeg tgggggtgea gtgtttgget eteacatece 1200 1260 cacattccag ctggtggggg tttgagctgg gtgttccttc tgctccccac tccccactca 1320 eggececae eccaegeaag ecteettge ecceaetett tgteteeage ttteaeagee 1380 ttggcgggca ggctgctgcg cctgttgctg ccccggctct cttccacccg cctcttcttt 1440 ctcagcctga gctttaccgt gaggtctggg cgccacacct tggcccctgc catgcctgct 1500 cccagaagca cccacgtggg tcccctgatt ctctcctcc ctgggctttg ctaaggagcc 1560 ctttcattgt ggcctttggt gtctgcctca tgcccatccc ctgttcttga gaacttggaa 1620 gcagaggggg cccctcctat tgctcccaag aggctccaca gtagggagcc cctcccagga 1680 gattctgagt ctgtgtttag gtgtcgattc ctgggtgggc cttggggtcc cctcaggcca 1740 ggcctgtgtg tgacctaagg ctggggggct ctgtcaggca cctagtgtcc cttggaggtg 1800 ggcggggctg ggtcctggtc tcctgaggac gggtggggag acaggctcag ggagatttcc 1860 acgaagetge cettgaacce etcetetgag geceaeactg ecetggeeet ttacaccetg

1920 cctcctgcac tagtaggcac ataatagatg ctcgccacct gtggagggca gggtttaaat 1980 ggctggaaag agctgagtgg gctgtttggc tagcgtacgc gcatttgttt aaaaggaaag 2040 ggtgtgtttc ttggcaaaga ctcttcggag gaaacgctga actggggatg ggtctctacc 2100 tgttctgggg cctcactgcc cttcctgccg gggacaggca gtcactggtg ggtttccccc 2160 cagtggaaac acaatatttt ggaaatattt gtatctagga taaaacttca tctggaccaa 2220 catgtctttg ttggtgttgt ggcccaggtg attttgagaa tgtagaatac atttggcaat 2280 ttccaaacgg agtgatgacc tgctcctccg cccccatgc cctccctgag gctggaggct 2340 tcagaagccc ctgccttggg aggaggctgt tctacctgag aagtctttgt ccccaccgtt ggtgacaatc agcattgacc tgtgaggcac ctgccaggtt tgggacgcag ctttagacat 2400 2460 ccagaaaacc gggggtggag gggtggggt ggggcttaag accccagagc ttgattcctt 2520 ttaactgtct catccccaaa gaatggtaca tgggtaccag gtaggttact tgaatcaccc 2580 tgagcctcga ttttcccacc cgttagaaac agggtaattc atgacagtgt ccgcttggga 2640 gacggctgtg acccctgaga attctcgctg catgccgtgg gctggctcgt gagactcaag 2700 gtctgggttc gaggcccccg caaccccttc tgactgtgtg gcctgggcga gtttgttgtt 2760 tgtaacctgg aaagcgtcac acctgcctgg cacggttatt gtgggcttca atgagattgt 2820 ttgtgtgaaa taaacgcttt gtgactggca cacaggcgct ctcatcccgg ctctcctggt 2880 gggcccggac cgctgggtgc tggctgcgga ggccctgtgc tccctggaac tgtctgcgct 2940 ggtcccaggg actcttgggc agagtggagg gcaaggggga aagcaccagc ctgctctggg 3000 gagacagtgg cagagggagg tgtttgcttt taaatacact cagcaggttc agacaggaga 3060 ggatccgagg ggaaatgttt agagccctca ggaggaggaa gagaccgagt tttaggaaaa 3120 acatcaaagc tggataggtt gggcagaaga gctggggata gcatttagag agactctgga 3180 cccggggcct ccccttgagt agagacccgc cctctgactg atggacgccg ctgacctggg gtcagacccg tgggctggac ccctgcccac cccgcaggaa ccctgaggcc taggggagct 3240 3300 gttgageett eagtgtetge atgtgggaag tgggeteett eacetacete acagggetgt 3360 tgtgaggggc gctgtggtgc ggttccaaag cacagggctt ggcgcacccc actgtgctct 3382 caataaatgt gtttcctgtc tt

<211> 4349

<212> DNA

<213> Homo sapiens

<400> 171

ccagggtctc	cgactgtccc	agacgggctg	gtgtgggctt	gggatcctcc	60
tcccgctaag	gtccctcagc	cactctgccc	caagatgggc	cgtggggctg	120
ctcacctgcc	gccaccacgg	cagagaatgg	gggcggcaag	aagaaacaga	180
actggatgag	ctgaagaagg	aggtggtcat	tgtcactggc	tgcttctcct	240
ggccaagagc	tccaagatca	tggattcctt	caagaacatg	gtacctcagc	300
gatccgggag	ggagagaaga	tgcagatcaa	cgcagaggaa	gtggtggtgg	360
ggaggtgaag	ggtggagacc	gcgtccctgc	tgacctccgg	atcatctctt	420
taaggtggat	aactcatcct	taacaggaga	gccggagccc	cagacccgct	480
cacccatgag	aaccccctgg	agacccgcaa	tatctgtttc	ttctccacca	540
aggcactgcc	aggggcattg	tgattgccac	aggagaccgg	acggtgatgg	600
tactctcgcc	tcaggcctgg	aggttgggcg	gacacccata	gcaatggaga	660
catccagctg	atcacagggg	tcgctgtatt	cctgggggtc	tccttcttcg	720
catcctgggc	tacagctggc	tggaggcagt	catcttcctc	atcggcatca	780
cgtgcctgag	gggcttctgg	ccactgtcac	tgtgtgcctg	accctgacag	840
ggcacggaag	aactgcctgg	tgaagaacct	ggaggcggtg	gagacgctgg	900
caccatctgc	tcggacaaga	cgggcaccct	cacccagaac	cgcatgaccg	960
gtggttcgac	aaccaaatcc	atgaggctga	caccaccgaa	gatcagtctg	1020
tgacaaacga	tcccctacgt	ggacggccct	gtctcgaatt	gctggtctct	1080
cgtcttcaag	gcaggacagg	agaacatctc	cgtgtctaag	cgggacacag	1140
ctctgagtca	gctctgctcg	agtgcattga	gctctcctgt	ggctcagtga	1200
agacagaaac	cccaaggtgg	cagagattcc	tttcaactct	accaacaagt	1260
tatccacgag	cgagaagaca	gccccagag	ccacgtgctg	gtgatgaagg	1320
gcgcattctg	gaccggtgct	ccaccatcct	ggtgcagggc	aaggagatcc	1380
ggagatgcaa	gatgcctttc	aaaatgccta	catggagctg	gggggacttg	1440
	tcccgctaag ctcacctgcc actggatgag ggccaagagc gatccgggag ggaggtgaag taaggtggat cacccatgag aggcactgcc tactctcgcc catccagctg catcctgggc cgtgcctgag ggcacggaag caccatctgc gtggttcgac tgacaaacga cgtcttcaag ctctgagtca agacagaaac tatccacgag	tcccgctaag gtccctcagc ctcacctgcc gccaccacgg actggatgag ctgaagaagg ggccaagagc tccaagatca gatccgggag ggagagaagaa ggaggtgaag ggtggagacc taaggtgat aactcatcct caccatgag aacccctgg aggcactgcc aggggcattg tactctcgcc tcaggcctgg catccagctg atcacagggg catcctgggc tacagctggc cgtgcctgag gggcttctgg ggcacggaag aactgcctgg gacacggaag aactgcctgg caccatctgc tcggacaaga gtggttcgac aaccaaatcc tgacaaacga tcccctacgt cgtcttcaag gcaggacagg ctctgagtca gctctgctg agacagaaac cccaaggtgg tatccacgag cgagaagaca gcgcattctg gaccggtgct	tcccgctaag gtccctcagc cactetgccc ctcacctgcc gccaccacgg cagagaatgg actggatgag ctgaagaagg aggtggtcat ggccaagagc tccaagatca tggattcctt gatccgggag ggagagaaga tgcagatcaa ggaggtgaag ggtggagacc gcgtccctgc taaggtggat aactcatcct taacaggaga cacccatgag aaccccctgg agacccgcaa aggcactgcc aggggcattg tgattgcac tactctcgcc tcaggcctgg aggttgggcg catccagctg atcacagggg tcgctgtatt catcctggc tacagctgg tggaggcagt cggcctgag gggcttctgg ccactgtacc ggcacggaag aactgcctgg tgaagaacct caccatctgc tcggacaaga caccaatctg tcggacaaga caccatctgc tcggacaaga caccatctgc tcggacaaga caccatctgc tcggacaaga caccatctgc tcggacaaga caccatctgc tcggacaaga caccatctgc tcggacaaga aactgcctg ggacggccct cgtcttcaag gcaggacagg agaacatctc ctctgagtca gctctgctcg agtgcattga agacagaaac cccaaggtgg cagagattcc tatccacgag cgagaagaca gccccaagag gcgcattctg gaccgtctt caccatctg caccatctgc tccaaggtgg cagagattcc tatccacgag cgagaagaca gccccaagag gcgcattctg gaccggtgct ccaccatctt	tecegetaag gteceteage caetetgeee caagatgggee cteaectgee gecaceaegg cagagaatgg gggeggeaagg actggatgag etgaagaagg aggtggteat tgteaetgge ggccaagage tecaagatea tggatteett caagaacatg gateegggag ggagagaaga tgeagateaa egeagggaga ggaggagaag gegggeggaag ggagggggaag gegggagaee gegteeetge tgaeeteegg taaaggtggat aacteateet taacaggaga geeggageee caeceatgag aaceeetgg aggetggaga gaggagaeegg tagtggagaeeggaattg tgattgeea aggagaeegg taeteetge teaggeetgg aggetggggg gaeaeeegg taeteetge teaggeetgg aggetgggeg gaeaeeegg taeteetgg taeaggegggggggggg	ccagggtcte cgactgtcce agacggctg gtgtgggct gggggctgg tcccgctaag gtccctcagc cactctgcc caagatggg cgggggctgg ctcaccacgg cagagaatgg gggcggcaag aagaaacaga actggatgag ctgaagaagg aggtggtcat tgtcactggc tgcttctcct ggccaagagc tccaagatca tggattcctt caagaacatg gtacctcagc gatccgggag ggagagaaga tgcagatcaa cgcagaggaa gtggtggtgg ggagggtgaag ggggggaaag aggtggtaat cgaagacatg gtacctcagc gatccgggag ggagagaaga tgcagatcaa cgcagaggaa gtggtggtgg ggagggtgaag ggtggagacc gcgtccctgc tgacctccgg atcatctctt taaggtggat aactcatcct taacaggaga gccggagccc cagacccgct cacccatgag aacccctgg agacccgcaa tatctgttt ttccacca aggcactgcc aggggcattg tgattgcac aggagaccgg acggtgatgg tactctcgcc tcaggcctgg aggttggggg gacacccata gcaatggaga catccagctg atcacagggg tcgctgtatt ccttggggt tcctttctcg catcctgggc tacaggggg tcgctgtatt ccttggggt tcctttctcg catcctgggc tacaggggg tggaggaccc tggggggact caccatcag gggcactgg tgaaggaacct gggggagggggggggg

1500 gggagcgtgt gctgggattc tgtcaactga atctgccatc tggaaagttt cctcggggct 1560 1620 tgtctatgat tgaccetece egggetgetg tgeeagatge tgtgggcaag tgeegaageg 1680 caggcatcaa ggtgatcatg gtaaccgggg atcaccctat cacagccaag gccattgcca 1740 aaggcgtggg catcatatca gagggtaacg agactgtgga ggacattgca gcccggctca 1800 acatteccat gagteaagte aacceeagag aageeaagge atgegtggtg caeggetetg 1860 acctgaagga catgacatcg gagcagctcg atgagatcct caagaaccac acagagatcg 1920 tetttgeteg aacgteteee cageagaage teateattgt ggagggatgt cagaggeagg 1980 gagccattgt ggccgtgacg ggtgacgggg tggacgactc ccctgcattg aagaaggctg 2040 acattggcat tgccatgggc atctctggct ctgacgtctc taagcaggca gccgacatga 2100 tcctgctgga tgacaacttt gcttccatcg tcacgggggt ggaggagggc cgcctgatct 2160 ttgacaactt gaagaaatcc atcgcctaca ccctgaccag caacatcccc gagatcaccc 2220 ccttcctgct gttcatcatt gccaacatcc ccctacctct gggcactgtg accatccttt 2280 gcattgacct gggcacagat atggtccctg ccatctcctt ggcctatgag gcagctgaga 2340 gtgatatcat gaagcggcag ccacgaaact cccagacgga caagctggtg aatgagaggc 2400 tcatcagcat ggcctacgga cagatcggga tgatccaggc actgggtggc ttcttcacct 2460 actttgtgat cctggcagag aacggtttcc tgccatcacg gctactggga atccgcctcg 2520 actgggatga ccggaccatg aatgatctgg aggacagcta tggacaggag tggacctatg 2580 agcagcggaa ggtggtggag ttcacgtgcc acacggcatt ctttgccagc atcgtggtgg 2640 tgcagtgggc tgacctcatc atctgcaaga cccgccgcaa ctcagtcttc cagcagggca 2700 tgaagaacaa gatcctgatt tttgggctcc tggaggagac ggcgttggct gcctttctct 2760 cttactgccc aggcatgggt gtagccctcc gcatgtaccc gctcaaagtc acctggtggt 2820 tetgegeett eecetacage etecteatet teatetatga tgaggteega aageteatee 2880 tgcggcggta tcctggtggc tgggtggaga aggagacata ctactgaccc cattggaaga 2940 agaaccaggc atggaaagat ggggagctct ggaggtgttg tggggatggt gatggagagg 3000 gatggaaata acgggtggca ttgggtggca acatttgggg agagataatg gggcaactca 3060 gcaggctaag ttgcggggta tataaattgg ggtgatgacc ccatagacct aactgtgaac 3120 aatcagatta gacactatgt gttagagtcc ccccgaccag atcettttcc atcccactcc 3180 actatgttgt ctattttttc tgaggaatta agggttaccc caccctgccc actcccatcc

3240 cttcaacccc acttcctact gtaatagatc agcatccaaa agcaggaacc catctaaacc 3300 agaaggaagc cctctcagat caccccagcc tcactccatt tcccacttcc acccccgtta 3360 getteetgea ggaetetate cetggettee cetteagace ttgcaateae aaaaggttet 3420 tetggtgagt geaagageet gagaetggaa aaggtggaet tgteteecag tegaggetgg 3480 taagggacct tcagggagag ctgggcagac aggtgggaga tggaggtagg gctggctgga 3540 ggaaggaaac aacaaaggaa gtgaggtagt gccaatgaca ggacatttga catgagtctc 3600 cagatagatg tcatggactc cagctctacg tcccacattt tagaataccc caccagcaga 3660 acaaactcag atctcatcag ggtagcagca gaggcaggac cagaaggcaa tcaagagctt 3720 ccagaaatgc cacacttgtg tgccacagag ttccccgctg acccttggtt aggggtcctc 3780 ttagtccaca aggtccggat gtcactcatg tacttaataa cacttcacct tctgtaatac 3840 taagteetea gageteeatg etgttetgaa agggatggee acaagttett teeeageete 3900 ttccattccc tttcttttca tgcccatccc gatgaacctg catcattccc cgacactgcc 3960 aagccaaccc tggaaaagga gttcgctggc cattggctag aatcagggtg gagaagttcc 4020 ctgaaccttc ctgtctccca gggacatgta tgcttccagg gacaagctta ggtcatgaac 4080 atggtcagaa cctttggaca agaggaaaaa tactaagaga tttgcttttt ctgggtgcgg 4140 tggctcatgc ctgtaatccc agcactttgg gaggccgagg caggtggatc acgaggtcag gagttcgagg cgagcctggc caacatggtg aaaccctgtc tctactaaaa gtacaaaaaa 4200 4260 ttagccagtc atggtggcac acgcctgtaa tctcagctac tcaggaggct gaggcaggag 4320 aattgettga acctgtgagg aagaggttge agtgagetga gategtgeea ttacacteea 4349 gcctgggcga aagggtgaga ctccatctc

<210> 172

<211> 3364

<212> DNA

<213> Homo sapiens

<400> 172

agtgctgccc ctgctccccc acctccctct ggagaacttt ttgcagctca gccctcacca 60

120 gatccaggcc ctggaggata gctggccagc agcaggtctg gggccagggc atgcccgcca 180 tgtgctgcgc agcctggtaa accagagtgt ccaggatggt gaggagcagg agctgtcaga 240 gccccagctt agagccatgc ttcctgtcct gcagggaact agtgttacac ctgctcaggc 300 tgtcctgctg cttggacggc tccttcctag gcacgatcta tccctggagg aactctgctc 360 cttgcacctt ctgctaccag gcctcagccc ccagacactc caggccatcc ctaggcgagt 420 cctggtcggg gcttgttcct gcctggcccc tgaactgtca cgcctctcag cctgccagac 480 cgcagcactg ctgcagacct ttcgggtatg agagtggcaa ggaggatgag ataatcaggg 540 ataccggctc tttctggttg ggaggaaggc atcttccctg aggccaggga aggcctttca 600 660 tcatgcaggt taaagatggt gttaaaaata tgggtacaac aggtgctggt ccagctgtgt 720 gtatccctgg tcaggtaagt gtgagatctc ccaactgagc tcctctcccc attctggggc 780 agtttcatat ggctggtgct acctcccaca ctaccctgca gtggccctga gagttctggt 840 tagetetgtg eccattagea geeeteecea gegeeagatg eaggacagea tgatecaete 900 acattgtcct agactaatgt caaagctgga agggcctgag aaatcttcca ggccacccac 960 cctgctttca gatgaaaaga ccaaggctgg gagaagctaa gggactttgt ttgcctggtg 1020 cctaactagc agcaacactt gaccacagca gcctgcagtg tgaggctctt aggcgtttat 1080 tgctacagtg gcaaatgcca ttccacttct gtcctagctt tggtcccttt ccaccccat 1140 ggttcctttt ctctgagtgc taagtacaga ctctctcacc tatcactaca ctgctatacc 1200 catcaccgcc agcagcctat tcccaccacc tggccagact gcctgcttcc cctgctccca 1260 ttaaagetge tacaaetgga tteettgget ettetggeaa ategaagaeg etaetgggag 1320 ctgccctggt ctgagcagca ggcacagttt ctctggaaga agatgcaagt acccaccaac 1380 cttaccetca ggaatetgea ggetetggge accetggeag gaggeatgte etgtgagttt ctgcagcaga tcaactccat ggtagacttc cttgaagtgg tgcacatgat ctatcagctg 1440 1500 cccactagag ttcgagggag cctgagggcc tgtatctggg cagagctaca gcggaggatg 1560 gcaatgccag aaccagaatg gacaactgta gggccagaac tgaacgggct ggatagcaag 1620 ctactcctgg acttaccgat ccagttgatg gacagactat ccaatgaatc cattatgttg 1680 gtggtggagc tggtgcaaag agctccagag cagctgctgg cactgacccc cctccaccag 1740 gcagccctgg cagagagggc actacaaaac ctgattcctg tctacaaggc ctggcccctg 1800 ttttgcctct gggttctgtt ccttgataat atgcttcacg ttacttgtcc atacctcttg

1860 gagtccgaga aatctcttgg agtccacctc tcagtctttc tgcctgctcc tatctgggct 1920 cattgcttaa ggaagtgaac aaaggctcca aaggagactc cagtctcagg ggaagtgctg 1980 gagaccttag gccctttggt tggattcctg gggacagaga gcacacgaca gatcccccta 2040 cagatectge tgteceatet cagteagetg caaggettet geetaggaga gaeatttgee 2100 acagagetgg gatggetget attgeaggag tetgttettg ggaaaccaga gttgtggage 2160 caggatgaag tagagcaagc tggacgccta gtattcactc tgtctactga ggcaatttcc 2220 ttgatcccca gggaggcctt gggtccagag accctggagc ggcttctaga aaagcagcag 2280 agctgggagc agagcagagt tggacagctg tgtagggagc cacagcttgc tgccaagaaa 2340 gcagccctgg tagcaggggt ggtgcgacca gctgctgagg atcttccagg acctgtgcca 2400 aattgtgcag atgtacgagg gacattccca gcagcctggt ctgcaaccca gattgcagag 2460 atggagetet cagactttga ggactgeetg acattatttg caggagaece aggacttggg 2520 cctgaggaac tgcgggcagc catgggcaaa gcaaaacagt tgtggggtcc cccccgggga 2580 tttcgtcctg agcagatcct gcagcttggt aggctcttaa taggtctagg agatcgggaa 2640 ctacaggage tgatectagt ggactgggga gtgetgagea ecetggggca gatagatgge 2700 tggagcacca ctcagctccg cattgtggtc tccagtttcc tacggcagag tggtcggcat gtgagccacc tggacttcgt tcatctgaca gcgctgggtt atactctctg tggactgcgg 2760 ccagaggagc tccagcacat cagcagttgg gagttcagcc aagcagctct cttcctcggc 2820 2880 accetgeate tecagtgete tgaggaacaa etggaggtte tggeceacet acttgtactg 2940 cctggtgggt ttggcccaat cagtaactgg gggcctgaga tcttcactga aattggcacc 3000 atagcagctg ggatcccaga cctggctctt tcagcactgc tgcggggaca gatccagggc 3060 gttactcctc ttgccatttc tgtcatccct cctcctaaat ttgctgtggt gtttagtccc 3120 atccaactat ctagtctcac cagtgctcag gctgtggctg tcactcctga gcaaatggcc 3180 tttctgagtc ctgagcagcg acgagcagtt gcatgggccc aacatgaggg aaaggagagc 3240 ccagaacagc aaggtcgaag tacagcctgg ggcctccagg actggtcacg accttcctgg 3300 tecetggtat tgactateag etteettgge eacetgetat gageetgtet etaeagtaga 3360 aggagattgt ggggagagaa atcttaagtc ataatgaata aagtgcaaac agaagtgcat 3364 cctg

<210> 173

<211> 3940

<212> DNA

<213> Homo sapiens

<400> 173

60 aatgtgatca gcaagggacc tttgagagcc gaggttccgc ttaaaatgga aagcacagtg 120 gaaacatcat gaaggactgg ttgtttgaat tgggtcactt actgtggaac tccggcacca 180 gccacatgct ctcggtagta ctcagccacc atgcagtcaa gtgacctctg gttgtgtcat 240 cttcatactg tgttaccccc ggaggtgaga gggacaggag gccacccccc caacccccag 300 gccagccctt ggaaggcatg tgtcagaaag gggtccctaa atccttgttt tacctggacc 360 cttggaggtt cttgagaagt ggactctgaa ataaataact ggtagaaatt ctacagtgtg 420 gaatttcttg cagttagcaa aagcttaggg gtccaggttt ttgcaggatt cctgtcttgg 480 teetttegaa eeaaggaget etgetggete tgeeaggeeg eeteacatge eeagtgggat 540 tctgacccgg cctccttggt gcggcagctt ctcccgttaa cggaagaaga cgcttagccc 600 ctctgacagg gccatggttg ttttttcaat taaaatgtcc tggagggagc atcgtgctca 660 ttatctcctg cccctgccct ctaccccagc cagaggtctt gatagcagaa cttttttaaa 720 aacagtagca tgtgtagtta tttttgtata cacgtggctt agattgggtt gcagacttca ttaattccat tcgaacccaa ctaaaacagg agacacaatc cttgttctga catcgagtgc 780 840 agettgtggt ttaaaatgag cetgeegget geatgggtge gegaeagtae aageaggget 900 tcaaggagtc tgcgcccagt gttttaaggg actacgacac tgacaatttg gggaaagcgt 960 ggtcttgata tacggggcag aaagagctct gtacagtgca cacacctgct gccgtccctg 1020 ggcagcccct gggtcccccc agccatgact gttctgcgcg agctcctgag ctgggcgacc 1080 tcagtgtggg tctcgccttc caagccagac agtcgttgga gtccagcttg cccggcgccg 1140 gccttcactg gttggctgga gcggcacttg gcgtcgccgc cggcccctca tgggggtttt 1200 ccgtttgtgg agtgtttggt accgcgtggt agttaaccct ccatgccagg cgactgcatt 1260 1320 aaggaccgct ctgctttgta agcaggaacc gcagtcccct gaggagggtg tgtgaagact 1380 cgctcatttg agttctttga aatgggtccc ttggtcctgc tgtcacattg ccttgagcta

1440 acggatectg tteccateat aggeeggtee ttggggeatt gggeaggtgg gggetttgtg 1500 cctctgtggc tgctgctgtc tgttctctaa caggcagaac tgagggattc tgaactcagg 1560 atgtgcagct ctccagactg agaccccaag gctgactcca ggtggatcca ttgtctcttt 1620 atteteatta egatttatea gaaaagtgag acaaatteag gatteteaaa tgetgaggea 1680 gccccggaat tggggggatc tttctgttgt tagtccaccc atattttcaa gcaggcatta 1740 aaggaaggtc agccactgcg cctagaataa gtaggtcagg cctgctccat ccattgtccc 1800 cggccccgca ccctcctct gagaagactg tggctcctga cacgtctaga gaggaagggc 1860 cccgggctgc tgagcgaaca cagtatgaag attgcttact gatccaaatg tccattttat 1920 tgcatgtttg ttactttttt tgttagatgt aatgtaagat tctcttatca catccattcc 1980 ctctgacatt agttttgagt taattgagat tctttaagcg ttagcctggg gaaggtaagt 2040 ctttatcttc cattagacat tttaaattta aaaatctaag taaaacacca gccgtgtttc 2100 tcaggtatga gttaaaagca caggtgggcg ggctccaagc agtccagagg gcgatgagga 2160 tgccgattgc tgggaagatc ctggtccctt tttgtcccca tgttttcaag aggaaggagg 2220 acgctgccat tttacttgag tgaaagaccc ttcgtcacgc acgaaacccc cgagggctct 2280 gggctcggtc ctgctgcccc gcagtgggcg ggctctgtgt gtcttacggt tgcatctgtt 2340 gtacctgaga aacatttttt aaacaaaaaa attcaacaca aaagaatttt ttaagaaaaa aatgctactg gcctaaataa ggtttatagt taagtattta gtcttaagtt gtaagatgct 2400 2460 aagtgtagtc ataagttacc cgagggtgtg tctaaaggga agggggtgct gggacccgca 2520 gcctcgccct aaaccagagc tcggtttgtt taggtggaag ttaaacgagc tgagcctcgg 2580 gacagcaaga gccaagcgcc gggacagcca ggtgccagcc agtggggggag ccgggttgtg 2640 cccaacgctg ccaatggctg ggcaggccag ccccgccca cgtggcagca aggatatggc 2700 ccgcaaggaa tgtgggtgcc ggcaggacag gcgattggtg gctatggacc gcccctgca 2760 ggaagaggag ccccccgcc accccaccg ttcacctcct acatcgtgtc cacccctcct 2820 ggaggettte eccetecca gggetteeet eagggetaeg gtgeeeegee acagtteagt 2880 tttggctacg ggcctccacc tccaccgcca gatcagtttg cccctccggg ggttcctcct 2940 ccaccagcca ctcccggggc agcacctctg gctttcccac cgcctccgtc tcaggctgcc 3000 ccggacatga gcaagccccc gacagctcag ccagacttcc cctatggtca gtatgcaggt 3060 tacgggcagg acttgagtgg cttcggacag ggcttctcag accccagcca gcagcctcct 3120 tectaegggg gteeteegt geeagggteg gggggeeee eegeeggegg eageggettt

ggacgagggc	agaaccacaa	cgtgcaaggg	ttccacccct	accgacgcta	gcccgcggcg	3180
ccgcgacgtc	tgcacggccc	agacccagga	ttccaaactt	gtgaactcgt	gacaatcaca	3240
aacttggcgg	caaagtggcg	actcaacctt	ggggggggg	gcggggggag	ggcgcgaggc	3300
ttttggagcg	gctgtgggtg	tcgtctggac	tgaggttttt	aaatatttct	ttctctaacc	3360
catcagcaca	ataaaaaaaa	gtcactggtt	caacaacagg	gtttaaaaaa	aatgtcttca	3420
gctttaattc	aaaacttcag	gtttcttttt	cttccttttt	tttggaaatt	attttcctga	3480
gccttttgtt	ttacggtata	ttgtaaactt	ttatgttaaa	gaaaaaatat	acatttacaa	3540
attgtgagat	ttttaagaga	aattttctac	gatgtatact	ggcttatttt	ttaatttaaa	3600
acggggtttc	cgtcggcact	ggtggagggg	gtgcgctgtt	agtcccctcg	ctcctggctt	3660
tgggggttgg	gacttggtgg	tccagaaact	ctgggagctt	ctagaagaaa	tctactgagt	3720
gtatttctgt	tttttgttta	attccttgct	tttgtcgact	gacctgcttg	gtagtgtctg	3780
aggtgaactg	tgggggttgc	gcacagccag	ccgcgtggat	cccacgcagc	gctgaaccga	3840
accgagtagg	aagcctttct	ccccaggcac	gtggcttcag	ggcgtttccc	attgaccagt	3900
ttgaccctgg	tttgaataaa	gagaagtgcg	tttggattag			3940

<210> 174

<211> 3547

<212> DNA

<213> Homo sapiens

<400> 174

60	tcctgacctc	agtctcaaac	tggccaggct	ttcaccatgt	gggatggggt	ttttttagta
120	ctggccaatt	acaggtgtgc	tgctgggatt	cctcccaaag	cctgccttgg	aggtgatctg
180	gtttcactct	ttgagacaga	tattactttt	aaaaaactat	tttacttttt	tttttttt
240	atctctacta	ctgaaacccc	tctcagccca	aatgacgcga	gctggagtgc	tgtcgcccag
300	tgggcaagta	ggcagcatgg	agctatggtg	gcatggtagc	aatttgccgg	gagatgcgaa
360	gcagaggttg	aacccgggag	gaatcgcttg	tgaggcggga	cttgggaggc	gtcccggcta
420	actccatctc	acagagcgag	agcctgggtg	actgcactcc	agatcgtgcc	cggtgagccg

480 aaaaaaaaa aaaaaaagtt tattggtaag aattttattc tttttattct ttttcattgc 540 ttttataaat gaaattgttt tcttaatttc ctttttggat ttttcattat tagtgtatag 600 aaacaactaa tttctatgtg ttaattttgt atcctgcaac tttgctgact ttattaattc 660 taataagtgt gtgtgtgtg gtatgtgtgt gtaatccatc ttggttttgt ttttatttt 720 acttggagac tcaggcaggg acaggttttc ttgtcatctt ccaaagcctg tgggtagact 780 ttttctaggt ccctattcat tgaagaagca ggcttcaagg atcccagctg tcctcaagag 840 tactggttcc agcttcctgc ttcatgaacc ggtcatggcc cctgcaaggt caaggtcatt 900 ataatgccag cacctgactg ctaaggctat ttcccttcca ataccttccc ctcagagctc 960 ctggtgcatc agctcattca accttctgct tttctgctct ctcttgattt aagaaacaga 1020 cacattatat ttctacatag ttagagcaca ggggtcccag catcccactt ccaaatgagc 1080 atgtcaagca catgcattca gagaggatac ctggaagcca aaattttgcc atagtgaaag 1140 gccttattcc tgaatacagc tagagtgggg aagaccttgg cctctccccc cgcaggcaag 1200 aatgttgcct ccacaggggg ctggtagcct gctaaggccc aggccacatg agtgggttgt 1260 ctactgttac tgagggccta ctatgtgcca gacaccatac taggtgcttt acatacatta 1320 tatgtcattg aatcttccct ctagtcctgt gagataggta ctattattgt cactgattca 1380 cttgagaaag ctgccaaaac acagatagca aggggcagaa ccaggattct gatttaggtt ggctcagcct tttatcaaat acatctggtc ttcctctgtc ctttcaaaag cctatagctt 1440 1500 cctcatcttg cccactcctc tgtgggtagg gtctgtggtt tcctttctct tatctatctt caacacacag tgggtgtgac ctgggtgcaa ccagtcacag ctctgcagag gttactgtga 1560 1620 ttttgccct gaaggatctg tccacaactt aggaactcac acagcttttg gcctgagccc 1680 ccgttaccaa gagaaaggag gtttttgcca aggactccaa ggggagtgca cttgatgctg 1740 gtcgggaccc aaagcaccca gccctccctg agacattgtg tgagtcgggc tgggcctcaa acacggcccc cactgcccca ccccagccag ggtggtgctt gtgtgggaag gactttaaat 1800 1860 ccagctgcca gacccctgga cgggagaagg agagacggct ggccaccatg cacggctcct 1920 gcagtttcct gatgcttctg ctgccgctac tgctactgct ggtggccacc acaggccccg 1980 ttggagccct cacagatgag gagaaacgtt tgatggtgga gctgcacaac ctctaccggg 2040 cccaggtatc cccgccggcc tcagacatgc tgcacatgag atgggacgag gagctggccg 2100 ccttcgccaa ggcctacgca cggcagtgcg tgtggggcca caacaaggag cgcgggcgcc 2160 gcggcgagaa tctgttcgcc atcacagacg agggcatgga cgtgccgctg gccatggagg

2220 agtggcacca cgagcgtgag cactacaacc tcagcgccgc cacctgcagc ccaggccaga 2280 tgtgcggcca ctacacgcag gtggtatggg ccaagacaga gaggatcggc tgtggttccc 2340 acttctgtga gaagctccag ggtgttgagg agaccaacat cgaattactg gtgtgcaact 2400 atgagectee ggggaaegtg aaggggaaac ggeectaeca ggaggggaet eegtgeteec 2460 aatgtccctc tggctaccac tgcaagaact ccctctgtga acccatcgga agcccggaag 2520 atgctcagga tttgccttac ctggtaactg aggccccatc cttccgggcg actgaagcat 2580 cagactctag gaaaatgggt gcagagggcc ctgacaagcc tagcgtcgtg tcagggctga 2640 actegggece tggteatgtg tggggecete teetgggaet actgeteetg ceteetetgg 2700 tgttggctgg aatcttctga aggggatacc actcaaaggc aaggcctggt gagggggcc 2760 ctggcctcat acceactgg attgtcttcc tccaagtgag agaccacagc ttcctgggca 2820 ggtcctgctc tgtggcccag cagccccct tcaccccaac ttctggccag attccaggcc 2880 agcactettg teeteetggg aggegtetae agggeeagee eetggeactg eeceaggagt 2940 gccttggctc tgggtaggcc catccttcag ctggctgcag actgttctga gcgctattta 3000 catgtgccca ctctcaggtt gtcctgtggc catcagcttc tctcccagac agaggatetc aggettecca ggaacceccg ggeceetece agteecetgg cetetteett gagecatetg 3060 3120 agtccaggac tgttccccag aagtgcctct tgccttctca gggtgaagag gtcagctgtc ctcctgtcat cttccccacc ctgtccccag cccctaaaca agatacttct tggttaaggc 3180 cctccggaag ggaaaggcta cggggcatgt gcctcatcac accatccatc ctggaggcac 3240 aaggeetgge tggetgegag etcaggggge egeetgagga etgeacaceg ggeecacace 3300 3360 tctcctgccc ctccctcctg agtcctgggg gtgggaggat ttgagggagc tcactgccta 3420 cctggcctgg ggctgtctgc ccacacagca tgtgcgctct ccctgagtgc ctgtgtagct 3480 ggggatgggg attcctaggg gcagatgaag gacaagcccc actggagtgg ggttctttga 3540 gtgggggagg cagggacgag ggaaggaaag caactcctga ctctccaata aaaacctgtc 3547 caacctg

<210> 175

<211> 4616

<212> DNA

<213> Homo sapiens

<400> 175

accacaaaac agtgtgtccc cagcagctcc ccaccccaga gccaaatgac agtagtgcac 126 ttaaaaaagga aaatcaggcc tgttgtcctt ctccggttgc attcagttgg gtcattaggg 186 ccggaccctg cctgcccctt ggcttctcag ggctttgctc tgacaccatg acagctgccc 246 ggggctgagg gcagctggct ccactcaaat gaggaagaag ggatcactcc cattagggcc 366 tccaggacctg ggccagttct tgctgctcct gccgtctccc ccgactggct gtgtcctagg 426 tccaggacc atgagactgt atctgcagga ctggcccaat ggtggccgag tcagaagtct 486 ggtgggctgag ggccagttct tgctgctcct gccgtcccc ccgactggct gtgtcctaga 426 tccaggacct gagccacc gttcactcag tcttgccctc gagggccagg tcagaagtct 486 ggtgggctcct gaagggttct caagggctgt ggcagctcag tcttggggccagg ttcagaagtct 486 ggtgggctcct gtaagggttc caagggggg gggggggggg							
ttaaaaagga aaatcaggcc tgttgtcctt ctccggttgc attcagttgg gtcattaggg 246 ccggaccctg cctgcccctt ggcttctcag ggctttgct tgacaccatg acagctgcc 246 ggggctgagg gcagctggct ccactcaaat gaggaagaag ggatcactcc cattagggcc 366 tgctttgctt atgcatgtgt gtgcacatgc atgtaaacca gggaccttca gctcaggcc 366 tccaggcctg ggccagttct tgctgctcct gccgtctcc ccgactggct gtgtcctgag 426 taactggaac atgagactgt atctgcagga ctggcccat ggtggccgag tcagaagtct 486 ggtggctctgt gagtcgccac gttcactcag tcttgccctc ccatgctttg gagccagtct ggtggggtcaggtctct gtaaggttct caaggctggt ggcagctcag tctggggtca ggacatgtcg gggtggctcct gtaaggttct caaggctggt ggcagctcag tctggggtca ggacatgtcg gggtggctcatgcg tttctggccc tgacataagc tgtctggcct ctctgtgaca tgatgaaatt 666 ggaaatcaatc cacagtcatg aaattgtgac actcaccaca attaagttag ggcataacat 726 cgcaggggag gtgatttcta ggcatattgc tgtccctttt gtgtatctgt catcacggt gccagggggggggg	60	ccagatgagt	agcaatcaag	ccagacaccc	ccgctcagcc	agccatcttc	aaactttcgc
ccggaccetg cctgcccett ggcttetcag ggctttgctc tgacacatg acagetgccc 246 ggggctgagg gcagetggct ccactcaaat gaggaagaag ggatcactcc cattagggcc 306 tgctttgctt atgcatgtgt gtgcacatgc atgtaaacca gggaccttca gctcacggcc 366 tccaggcctg ggccagttct tgctgctcct gccgtctccc ccgactggct gtgtcctagg 426 taactggaac atgagactgt atctgcagga ctggcccat ggtggccgag tcagaagtct 486 ggtggctcct gtagggtcac gttcactcag tcttgccctc ccatgctttg gagccagtct 546 ggtggctcct gtagggttc caagggtgt ggcaggtgg ggcaggtcag tctggggtcagg gggggtcatgg tttctggccc tgacactaagc tgtctggcct ctctgtgaca tgaggaaatt 666 gggtcatgcg tttctggccc tgacataagc tgtctggcct ctctgtgaca tgatgaaatt 666 gaaatcaatc cacagtcatg aaattgtgac actcaccag attaagttag ggcataacat 726 cgaggggag gtgattcta ggcatattgc tgtcccttt gtgtatctga atgcgtgggt 786 cgcaggggag gtgatttcta ggcatattgc tgtccctttt gtgtatctgt catcacggatg 487 cccagggggag gtgattcta ggcatattgc tgtccctttt gtgtatctgt catcacggatg 487 cccagtggaac gccaccccg tcttgcctgg gtcggggcct ggggggagac ccatttcaca 666 gaaactcatt gtagaatggaa accgaggaa acctgaacgaa atcctccca cccccatagc 966 caactcctt gtagaatggaa ggcatattgc tgtccctttt gtgtatctgt catcacggatg 687 cccagtggaac gccacccccg tcttgcctgg gtcggggcct ggggggagac ttccactaga 1026 tctacttcag gagaacgaaa gccaaggaa acctgaacgt ggggtggagcg ttccactgag 1026 tctacttcag gagaacgaaa atgctgcttt caaaacttag tttccttcc atttctcct 1146 agtctggcct ttgacacaaa tctggtagaa agaaggcaa gaagggaag gagagggag ggagggggggg	120	agtagtgcac	gccaaatgac	ccaccccaga	cagcagctcc	agtgtgtccc	accacaaaac
ggggettgagg gcagctggct ccactcaaat gaggaagaag ggatcactcc cattagggcc 300 tgctttgctt atgcatgtgt gtgcacatgc atgtaaacca gggaccttca gctcacggcc 360 tccaggcctg ggccagttct tgctgctcct gccgtctccc ccgactggct gtgtcctgag 420 taactggaac atgagactgt atctgcagga ctggccccat ggtggccgag tcagaagtct 480 ggtggctcct gtaaggttct caaggctggt ggcagctcct gtaaggttct caaggctggt ggcagctcag tctggggccag tcagaagtct 340 gggtggctcct gtaaggttct caaggctggt ggcagctcag tctggggtca ggacatgtcg 340 gggtcatgcg tttctggccc tgacataagc tgtctggcct ctctgtgaca tgatgaaatt 340 gaaatcaatc cacagtcatg aaattgtgac actccaccag attaagttag ggcataacat 720 taacttggaa atggccatgt catcacccct gcggctgtcc tatagctgag atggcgggg ggatttcta ggcatattgc tgtccctttt gtgtatctgt catccggatg 340 cgcaggggag gtgatttcta ggcatattgc tgtccctttt gtgtatctgt catccggatg 340 cccaggggaag gtgatttcta ggcatattgc tgtccctttt gtgtatctgt catccggatg 340 cccagaggaa aggaccgaac accactccacacacacacacacacacacacacacac	180	gtcattaggg	attcagttgg	ctccggttgc	tgttgtcctt	aaatcaggcc	ttaaaaagga
tgctttgctt atgcatgtgt gtgcacatgc atgtaaacca gggaccttca gctcacggcc 366 tecaggectg ggccagttct tgctgctcct gccgtctcc ccgactggct gtgtcctgag 426 taactggaac atgagactgt atctgcagga ctggccccat ggtggccgag tcagaagtct 486 gtttcctgtg agtcgcacc gttcactcag tcttgccctc ccatgctttg gagccagtct 546 ggtggctcct gtaaggttct caaggctggt ggcagctcatg tcttgggctc gtaaggttct caaggctggt ggcagctcag tcttggggtca ggacatgtcg gggtcatgcg tttctggccc tgacataagc tgtctggcct ctctgtgaca tgatgaaatt 666 gaaatcaatc cacagtcatg aaattgtgac actccaccag attaagttag ggcataacat 726 cgcaggggag gtgatttcta ggcatattgc tgtccctttt gtgtatctgt catccggtgg 786 cgcaggggag gtgatttcta ggcatattgc tgtccctttt gtgtatctgt catccggatg 846 cttcggaccc cacgcctctg caagtgggag agacccgagc atcctccca cccccatagc 900 tccagtgaca gccaccccg tcttgcctgg gtcggggct gggggagg ggaatggaa acctgacgag acctgacga accttcaca 966 cacactcctt gtagatggag gccagagaa acctgacgg gggggggggg	240	acagctgccc	tgacaccatg	ggctttgctc	ggcttctcag	cctgcccctt	ccggaccctg
tecaggectg ggecagttet tgetgeteet geegteteee eegactgeet gtgteetgag 426 taactggaac atgagactgt atetgeagga etgececat ggtggeegag teagaagtet 486 gttteetgtg agtegeeace gtteacteag tettgeeete ceatgetttg gagecagtet 546 ggtggeteet gtaaggttet eaaggetggt ggeageteag tetggggtea ggacatgteg 606 gggteatgeg tttetggeee tgacataage tgtetggeet etetgtgaa tgatgaaatt 666 gaaateaate eacagteatg aaattgtgae actecaceag attaagttag ggeataacat 726 taacttggaa atggeeatgt eateaceeet geggetgee tatagetgag atgegtgggt eggaggggag gtgattteta ggeatattge tgteeetttt gtgtatetgt eateeggatg 786 eeteeggggaa geeaceeeeg tettgeetgg gteggggee ateeteeea eeceetage 906 tecagtgeac geeaceeeeg tettgeetgg gteggggee gggggggggggg	300	cattagggcc	ggatcactcc	gaggaagaag	ccactcaaat	gcagctggct	ggggctgagg
taactggaac atgagactgt atctgcagga ctggcccat ggtggccgag tcagaagtct 486 gtttcctgtg agtcgccacc gttcactcag tcttgccctc ccatgctttg gagccagtct 546 ggtggctcct gtaaagttct caaggctggt ggcagctcag tctggggtca ggacatgtcg 606 gggtcatgcg tttctggccc tgacataagc tgtctggcct ctctgtgaca tgatgaaatt 666 gaaatcaatc cacagtcatg aaattgtgac actccaccag attaagttag ggcataacat 726 taacttggaa atggccatgt catcacccct gcggctgtcc tatagctgag atgcgtgggt ctcgaggggag gtgattcta ggcatattgc tgtccctttt gtgtatctgt catccggatg 846 cttcggacc cacgcctctg caagtgggag agacccgagc atcctccca cccccatage 906 tccagtgcac gccacccccg tcttgcctgg gtcggggcct gcggccagca ccatttcaca 966 cacactcctt gtagatggga gccagaggaa acctgaacgt ggggtggaggg ttccactgag 906 tccagtgcac gccacccccg tcttgcctgg gtcggggcct gcggccagca ccatttcaca 966 cacactcctt gtagatggga gccagaggaa acctgaacgt ggggtggaggg ttccactgag 1026 tctacttcag gagacagaag gcccatgctg atgggggagg aggagggagg ttccactgag 1026 tctacttcag gagacagaag gcccatgctg atgggggagg aggagggggggggg	360	gctcacggcc	gggaccttca	atgtaaacca	gtgcacatgc	atgcatgtgt	tgctttgctt
gtttcctgtg agtcgccacc gttcactcag tcttgccctc ccatgctttg gagccagtct 540 ggtggctcct gtaaggttct caaggctggt ggcagctcag tctggggtca ggacatgtcg 600 gggtcatgcg tttctggccc tgacataagc tgtctggcct ctctgtgaca tgatgaaatt 660 gaaatcaatc cacagtcatg aaattgtgac actccaccag attaagttag ggcataacat 720 taacttggaa atggccatgt catcacccct gcggctgtcc tatagctgag atgcgtgggt 780 cgcaggggag gtgattcta ggcatattgc tgtccctttt gtgtatctgt catccggatg 840 cttcggacc cacgcctctg caagtgggag agacccgagc atcctccca ccccatage 900 tccagtgcac gccacccccg tcttgcctgg gtcggggcct gggggaggag ttccactgag 960 tctacttcag gagacagaag gccatgctg atgggggag aggagggagg ttccactgag 1020 tctacttcag gagacagaa gcccatgctg atgggggagg aggagggagg tgggaatttt caaaacttcat ttgacacaaa tctggtagaa agaagcctga taaattgagg gcacttgtac 1200 cctccctgtg cccccagaag gttcttggag agaagtgcaa gaattgtga acacggggt 1260 ggaggggcggg tggatggcca tgggctgggc ctccgtatca ggcctgctca ccttgctggg 1320 agctttattc tgatctcatt ttgaatgttc cagagggagc atcataaagag cccagagctc 1380 cgatttccaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 1440 atactaactt attttgttgg ggttttggtt gtctcttgtc ttaggacctg gtagttattt 1500	420	gtgtcctgag	ccgactggct	gccgtctccc	tgctgctcct	ggccagttct	tccaggcctg
ggtggctcct gtaaggttct caaggctggt ggcagctcag tctggggtca ggacatgtcg 600 gggtcatgcg tttctggccc tgacataagc tgtctggcct ctctgtgaca tgatgaaatt 660 gaaatcaatc cacagtcatg aaattgtgac actccaccag attaagttag ggcataacat 720 cgcaggggag gtgattcta ggcatattgc tgtccctttt gtgtatctgt catccggatg 840 cttcggaccc cacgcctctg caagtgggag agacccgagc atcctccca accccatagc 900 tccagtgcac gccaccccg tcttgcctgg gtcggggcct gcggccagca ccatttcaca 960 cacactcctt gtagatggag gccatagca acctgaacgt gggtggagcg ttccactgag 1020 tctacttcag gagacagaag gccatgctg atgggggag aggagggagg ttccactgag 1020 tctacttcag gagacagaag gcccatgctg atgggggagg aggagggacg ttggacatttt 1080 ggacaccagg ggaaatggaa atctggagaa acctgaacgt gtgggaggg ttggacggt ttgacacaaa tctggtagaa agaagcctga taaattgagg gcacttgtac 1200 cctccctgtg cccccagaag gttcttggag agaagtgcaa gaattgtga acacggcggt 1226 ggaggggggg tggatggca tgggctgggc ctccgtatca ggcctgctaa ccttgctggg 1320 agctttattc tgatctcatt ttgaatgttc cagagggagc atcataagag cccagagctc 1380 cgatttccaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 1440 atactaactt attttgttgg ggttttggtt gtctcttgtc ttaggacctg gtagttattt 1500	480	tcagaagtct	ggtggccgag	ctggccccat	atctgcagga	atgagactgt	taactggaac
gggtcatgcg tttctggccc tgacataagc tgtctggcct ctctgtgaca tgatgaaatt 666 gaaatcaatc cacagtcatg aaattgtgac actccaccag attaagttag ggcataacat 726 taacttggaa atggccatgt catcacccct gcggctgtcc tatagctgag atgcgtgggt 786 cgcaggggag gtgattcta ggcatattgc tgtccctttt gtgtatctgt catccggatg 846 cttcggaccc cacgcctctg caagtgggag agacccgagc atcctcccca cccccatagc 906 tccagtgcac gccaccccg tcttgcctgg gtcggggcct gcggccagca ccatttcaca 966 cacactcctt gtagatggag gccagaggaa acctgaacgt gggtggagcg ttccactgag 1026 tctacttcag gagacagaag gcccatgctg atgggggag aggagggagg ttccactgag 1026 tctacttcag gagacagaag gcccatgctg atgggggagg aggagggagg tggcatttt 1086 ggacaccagg ggaaatggaa atgctgcttt caaaacttag tttcctttcc	540	gagccagtct	ccatgctttg	tcttgccctc	gttcactcag	agtcgccacc	gtttcctgtg
gaaatcaatc cacagtcatg aaattgtgac actccaccag attaagttag ggcataacat 726 taacttggaa atggccatgt catcacccct geggetgtee tatagetgag atgegtgggt 786 egeaggggag gtgatteta ggcatattge tgtecetttt gtgtatetgt catceggatg 846 etteggacce cacgeetetg caagtgggag agaccegage atectececa eccecatage 906 tecagtgeae gecacceceg tettgeetgg gteggggeet geggegagea ecattetaaca 966 eacacteett gtagatggga gecagaggaa acetgaacgt gggtggageg ttecactgag 1026 tetaetteag gagacagaag geceatgetg atgggggagg aggagggaeg ttecactgag 1026 tetaetteag gagacagaag geceatgetg atgggggagg aggagggaeg tgggcatttt 1086 ggacaccagg ggaaatggaa atgetgett caaaacttag ttteettee atttetteet 1146 agtetggeet ttgacacaaa tetggtagaa agaageetga taaaattgagg geaettgtae 1206 eeteectgtg eececagaag gttettggag agaagtgeaa gaatttgtga acacggeggt 1266 ggaggggggg tggatggeea tgggetggge eteegtaca ggeetgetea eettgetggg 1326 egattteete tgateteatt ttgaatgtte eagagggage ateataagag eecagagete 1386 egattteeaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 1446 atactaactt attttgttgg ggttttggtt gtetettget ttaggacctg gtagttattt 1506	600	ggacatgtcg	tctggggtca	ggcagctcag	caaggctggt	gtaaggttct	ggtggctcct
taacttggaa atggccatgt catcacccct geggetgtee tatagetgag atgegtgggt 786 egeaggggag gtgattteta ggeatattge tgtecetttt gtgtatetgt catceggatg 846 etteggacce caegeetetg caagtgggag agaecegage atceteecea eeeecatage 906 eacacteett gtagatggga gecagaggaa acetgaacgt geggeggge tecactggag 1026 eacacteett gtagatggga gecagaggaa acetgaacgt gggtggageg ttecactgag 1026 ettactteag gagacagaag geceatgetg atgggggagg aggagggagg ttecactgag 1026 eggacaccagg ggaaatggaa atgetgett caaaacttag ttteettee atteeteet 1146 agtetggeet ttgacacaaa tetggtagaa agaaggetga taaattgagg geacttgtae 1206 eeteectgtg eeeecagaag gttettggag agaagtgeaa gaatttgtga acacggeggt 1226 eggagggeggg tggatggeea tgggetgge eteegtaca ggeetgetea eettggtag agetttatte tgateteatt ttgaatgtte eagagggage atcataagag eeeaggete 1326 eggattteea agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 1446 atactaactt attttgttgg ggttttggtt gteetettgte ttaggacctg gtagttattt 1506	660	tgatgaaatt	ctctgtgaca	tgtctggcct	tgacataagc	tttctggccc	gggtcatgcg
cgcagggag gtgatttcta ggcatattgc tgtccctttt gtgtatctgt catccggatg 846 cttcggaccc cacgcctctg caagtgggag agacccgagc atcctccca cccccatagc 906 tccagtgcac gccacccccg tcttgcctgg gtcggggcct gcggccagca ccatttcaca 966 cacactcctt gtagatggga gccagaggaa acctgaacgt gggtggagcg ttccactgag 1026 tctacttcag gagacagaag gcccatgctg atgggggagg aggagggacg tgggcatttt 1086 ggacaccagg ggaaatggaa atgctgcttt caaaacttag tttcctttcc	720	ggcataacat	attaagttag	actccaccag	aaattgtgac	cacagtcatg	gaaatcaatc
ctteggacce caegectetg caagtgggag agaccegage atectecea cececatage 900 tecagtgeac gecaeceeg tettgeetgg gteggggeet gegggeagea ceattteaca 960 caeacteett gtagatggga gecagaggaa acetgaacgt gggtggageg ttecaetgag 1020 tetaetteag gagacagaag geceatgetg atgggggagg aggagggaeg tgggeatttt 1080 ggacaccagg ggaaatggaa atgetgett eaaaacttag ttteettee atttetteet 1140 agtetggeet ttgacacaaa tetggtagaa agaaggeetga taaattgagg geaettgtae 1200 eeteectgtg eeeceagaag gttettggag agaagtgeaa gaatttgtga acaeggeggt 1260 ggagggeggg tggatggea tgggetgge eteegtatea ggeetgetea eettgetggg 1320 agetttatte tgateteatt ttgaatgtte eagagggage ateataagag eeeagagete 1380 egatteeaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 1440 ataetaactt attttgttgg ggttttggtt gteetettgte ttaggacctg gtagttattt 1500	780	atgcgtgggt	tatagctgag	gcggctgtcc	catcacccct	atggccatgt	taacttggaa
tecagtgeae gecaceceg tettgeetgg gteggggeet geggeeagea ecattteaea 960 cacacteett gtagatggga gecagaggaa acetgaaegt gggtggageg ttecaetgag 1020 tetaetteag gagacagaag geceatgetg atgggggagg aggagggaeg tgggeatttt 1080 ggacaceagg ggaaatggaa atgetgettt caaaacttag ttteettee atttetteet 1140 agtetggeet ttgacacaaa tetggtagaa agaaggeetga taaattgagg geaettgtae 1200 ceteeetgtg eececagaag gttettggag agaagtgeaa gaatttgtga acaeggeggt 1260 ggagggeggg tggatggea tgggetggge eteegtatea ggeetgetea eettgetggg 1320 agetttatte tgateteatt ttgaatgtte eagagggage ateataagag eecagagete 1380 egattteeaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 1440 ataetaactt attttgttgg ggttttggtt gteetetgte ttaggacetg gtagttattt 1500	840	catccggatg	gtgtatctgt	tgtccctttt	ggcatattgc	gtgatttcta	cgcaggggag
cacactcctt gtagatggga gccagaggaa acctgaacgt gggtggagcg ttccactgag 1026 tctacttcag gagacagaag gcccatgctg atggggagg aggagggacg tgggcatttt 1086 ggacaccagg ggaaatggaa atgctgcttt caaaacttag tttcctttcc	900	ccccatagc	atcctcccca	agacccgagc	caagtgggag	cacgcctctg	cttcggaccc
tctacttcag gagacagaag gcccatgctg atggggagg aggagggacg tgggcatttt 1086 ggacaccagg ggaaatggaa atgctgcttt caaaacttag tttcctttcc	960	ccatttcaca	gcggccagca	gtcggggcct	tcttgcctgg	gccacccccg	tccagtgcac
ggacaccagg ggaaatggaa atgctgcttt caaaacttag tttcctttcc	1020	ttccactgag	gggtggagcg	acctgaacgt	gccagaggaa	gtagatggga	cacactcctt
agtetgget ttgacacaaa tetggtagaa agaageetga taaattgagg geaettgtae 1200 eeteectgtg eeceeagaag gttettggag agaagtgeaa gaatttgtga acaeggeggt 1260 ggagggeggg tggatggeea tgggetggge eteegtatea ggeetgetea eettgetggg 1320 agetttatte tgateteatt ttgaatgtte eagagggage ateataagag eecagagete 1380 egattteeaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 1440 ataeetaaett atttgttgg ggttttggtt gteetetge ttaggaeetg gtagttattt 1500 egattaeetg	1080	tgggcatttt	aggagggacg	atgggggagg	gcccatgctg	gagacagaag	tctacttcag
cctccctgtg cccccagaag gttcttggag agaagtgcaa gaatttgtga acacggcggt 1266 ggagggcggg tggatggcca tgggctgggc ctccgtatca ggcctgctca ccttgctggg 1326 agctttattc tgatctcatt ttgaatgttc cagagggagc atcataagag cccagagctc 1386 cgatttccaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 1446 atactaactt attttgttgg ggttttggtt gtctcttgtc ttaggacctg gtagttattt 1506	1140	atttcttcct	tttcctttcc	caaaacttag	atgctgcttt	ggaaatggaa	ggacaccagg
ggagggcggg tggatggcca tgggctgggc ctccgtatca ggcctgctca ccttgctggg 1326 agctttattc tgatctcatt ttgaatgttc cagagggagc atcataagag cccagagctc 1386 cgatttccaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 1446 atactaactt attttgttgg ggttttggtt gtctcttgtc ttaggacctg gtagttattt 1506	1200	gcacttgtac	taaattgagg	agaagcctga	tctggtagaa	ttgacacaaa	agtctggcct
agctttattc tgatctcatt ttgaatgttc cagagggagc atcataagag cccagagctc 138ccgatttccaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 144cataactt attttgttgg ggttttggtt gtctcttgtc ttaggacctg gtagttattt 150cc	1260	acacggcggt	gaatttgtga	agaagtgcaa	gttcttggag	ccccagaag	cctccctgtg
cgatttccaa agagtgatat tgacatttat ggagattggt gttgtaacat attttgataa 144 atactaactt attttgttgg ggttttggtt gtctcttgtc ttaggacctg gtagttattt 150	1320	ccttgctggg	ggcctgctca	ctccgtatca	tgggctgggc	tggatggcca	ggagggcggg
atactaactt attttgttgg ggttttggtt gtctcttgtc ttaggacctg gtagttattt 150	1380	cccagagctc	atcataagag	cagagggagc	ttgaatgttc	tgatctcatt	agctttattc
	1440	attttgataa	gttgtaacat	ggagattggt	tgacatttat	agagtgatat	cgatttccaa
gcttgatttt tttttccgtt attttctaca taggcaaaga gaattcgagg gatagacagt 156	1500	gtagttattt	ttaggacctg	gtctcttgtc	ggttttggtt	attttgttgg	atactaactt
	1560	gatagacagt	gaattcgagg	taggcaaaga	attttctaca	tttttccgtt	gcttgatttt

1620 ctccaagaaa agtgaagtgg tgggagagaa ttgctttttt ctttttttc ttttctctag 1680 tttttctttc tggctgagat ttccgtgcaa gacagcaccc aatagactat ttagagttga 1740 catttgacat tttaatgggc gccatggctc attttgtaga ttgagaaggt gcgtctcccc 1800 tgctccaagt ctcatcatga cagcgtgctg acagctggga gtctgtggcc ttcctcacgc 1860 agaggeetta aagetggaca cagaageaeg eetaggetgg geagggatgg gaeceatgee 1920 ccctccttag aggacggct tcctggttag gaaaggacac gtgggggtgc cttgcataat 1980 agttcactgg tcaccgtgct tttatgagta gtgtttttgt gcacttgcca ggggttttct ctctgtgtgc gaggggagtg atttaagcaa tggtgtctgg agtaagcctt acaattttaa 2040 2100 tagacttttt cttatcatat ccctcatttc tttccctgaa ataaaaatac acacaagcaa 2160 aaaaaaatga tagtttcaca tctcttagtt cccttgccca aacaagaata ttcttagttc 2220 cactggccag gattttccta catagtcaga acttacacat tactagaggc acacccacca 2280 aggagtattg tgtctacttt tatctgtgca ccagccacaa atacccacat tggaaagacc 2340 cattigtgat gggtaaacat cccttcctgt ctcccacaac ccctgtgact gccctgcatg 2400 tgttcatgac ctccgaaggc ccaaattcat gaagcagcaa acccagcaga tctccacccc 2460 cctgcctcag gacctctgct gaagaggggg atgaagtggg tctccaggga ggcagtgggg 2520 gccttgttgg cagctggctc gggagccggc ttacaggagg gcagctctgc agttgggagg 2580 ggcaccgtcc ggaggagacc aggcctctac acaccccca ctctacttat catccctgct 2640 cacacaccct tgtccaaggc tttatgcatc ggatttattt ttccaaatca agaggacagt gatagatgca ttttccccag gctgtctcag aaaggtcgct aaatgtatac tgttgtcaga 2700 2760 attgctgaga tctccccca cttttggttt ttgcagcagt aaaaactctt tccactgtga 2820 cttattttct ctctcaggca gccagccacc tggtcccttg tgctgactct agcacagtgg 2880 ccaggatcca atacgagtcc aggggtgacc gcaggatggt gggggcagcg ggcttctcca 2940 cctacccag ccaccaagge cctgacgcae tgcctcctge accttcagea catccctgtg 3000 cacagetgga agggtgcatg gecegeteae etttgtteag atgggtggaa aegetgatga 3060 taccagecce teectgeegt geeetgeea eggageagge attgtgaact ggetggtgtt 3120 tgcagtccca cgtggcatgg cctccagccc aacccacagt ggagactgga gacagggcaa 3180 tgagtctggt cgggggcacg tggacatgcc ccataggggc cccacccaga cttaacaggc 3240 aaggtcctgg gcattgcgcg acgcaggact caatgctaaa gcaagcctgc ctggctctgt 3300 gccagggccc ctcttctgat tcacacatcc catttttaca cagacccttc cttcttaata

3360 aaggctgaca gttctgttgg cagccaagaa cccacaccat gaagacaggg agtgaggggc 3420 ctttgtgccc aactccagca cagctgcgtt ctggggtgtg tgagaggcat gttcgtgtct 3480 gtgcgctggt ggtctcgtga gacagttccg aggacgggga aattgcaggg tggtggggc 3540 gtgaggetta tatgtggaac tgatgcagag ttcgcctgca gacggatctg gatatacact 3600 atgtataatt gttacgtgta atttaaaata tatctgttgc catcgtcatg agaagattat 3660 atgtaagget etgaagggag agggagatgt acattetgee aggeteetgg ggacettate 3720 cgagtcatga aattgatgac tgttgatcca gtggtgcaag aagctacact ccatgtgtca 3780 tcacgcttat gactcctaat gtatttttaa ggcaaaaaat gtcagccgac tccatcttca 3840 cccctcgatt cctcgagtcc agcctttctg tgccagtgct tcactgagcc acaacgctct 3900 cgccatcggg acccggctgg gcctggagtc tcggggcaca gttgccatgg agccctcctg 3960 ggtcattcta ccttggccaa gcttaaagag aggattttct cagggtattt attagtgtgt 4020 ccagcagggt caggaagcag gatggaaaga tgcattcaga ctgttaattt attaacaagg caaatgattt tgtgtttctt gatgacagac tattaagttt gggacttatt ttcccatttg 4080 4140 agaagttata atatatattt aagatgataa gtttcctgct taagttgtgc ctttcagctt 4200 caatgagttt aaggagcact aagggtaatg ataccaatga gggttggttt attatcaaac 4260 ctgaatagct gtggtttctc cagtaaatat tttcttctac tgaacatgga gccattatta agagttgtgt gttttttatt atgtacattt gtatattttt ttgcttgttt gatgttctat 4320 4380 ttttctaata gttttctttt agtttcttaa agttgtgata ctagatttag attctgatgc 4440 4500 4560 gctgacaaca ctgtgtacat tgaccacttc ctaccatact ttatgttgta aaatcaaact 4616 cttttgtggt acattatete atgettetge aaattegaat aaattetatg gettee

<210> 176

<211> 4388

<212> DNA

<213> Homo sapiens

<400> 176

ttctttgctg	tgctggcgat	cctcaccatc	ctcggcgttc	tcaatgggct	ggttttgctt	60
cccgtgcttt	tgtctttctt	tggaccatat	cctgaggtca	gtagtgacac	ggggatgtcc	120
cacgtgtagg	ccggctgaat	gctgtgtttc	ctgtgccgct	cttcacttcg	atacttaggt	180
gcctccccac	ttgctggtgg	ttcttcagta	aacatctcag	agtcatgtct	gttttcctct	240
tcggtgtact	ggctttgagg	gctagagggc	ggtttcggtt	tggttcctct	aaatcaactg	300
attggcagcc	tgggtcttac	agatctttat	acagtaaatg	aagactttcc	ccttgagatg	360
cataattgga	cttcacaaga	gtaaaaagta	cacatcctgc	ctttccagtg	tggagcaggg	420
gacagttctt	ctgctccagc	tgcgggacct	gaaggtcctc	caggtggtag	agaaggggag	480
gttaatacgg	cacagtgcgc	agggccccag	ggcagggaac	agaggcccct	gaaaaatacc	540
gtgctttgag	ctttgagtgt	ggccagcagg	taaatggaca	agaacacttt	taacatggaa	600
tccccttaaa	taggtgtctc	cagccaacgg	cttgaaccgc	ctgcccacac	cctccctga	660
gccacccccc	agcgtggtcc	gcttcgccat	gccgcccggc	cacacgcaca	gcgggtctga	720
ttcctccgac	tcggagtata	gttcccagac	gacagtgtca	ggcctcagcg	aggagcttcg	780
gcactacgag	gcccagcagg	gcgcgggagg	ccctgcccac	caagtgatcg	tggaagccac	840
agaaaacccc	gtcttcgccc	actccactgt	ggtccatccc	gaatccaggc	atcacccacc	900
ctcgaacccg	agacagcagc	cccacctgga	ctcagggtcc	ctgcctcccg	gacggcaagg	960
ccagcagccc	cgcagggacc	ccccagaga	aggcttgtgg	ccaccccct	acagaccgcg	1020
cagagacgct	tttgaaattt	ctactgaagg	gcattctggc	cctagcaata	gggcccgctg	1080
gggccctcgc	ggggcccgtt	ctcacaaccc	tcggaaccca	gcgtccactg	ccatgggcag	1140
ctccgtgccc	ggctactgcc	agcccatcac	cactgtgacg	gcttctgcct	ccgtgactgt	1200
cgccgtgcac	ccgccgcctg	tccctgggcc	tgggcggaac	ccccgagggg	gactctgccc	1260
aggctaccct	gagactgacc	acggcctgtt	tgaggacccc	acgtgccttt	ccacgtccgg	1320
tgtgagagga	gggattcgaa	ggtggaagtc	attgagctgc	aggacgtgga	atgcgaggag	1380
aggccccggg	gaagcagctc	caactgaggg	tgattaaaat	ctgaagcaaa	gaggccaaag	1440
attggaaacc	cccaccccc	acctctttcc	agaactgctt	gaagagaact	ggttggagtt	1500
atggaaaaga	tgccctgtgc	caggacagca	gttcattgtt	actgtaaccg	attgtattat	1560
tttgttaaat	atttctataa	atatttaaga	gatgtacaca	tgtgtaatat	aggaaggaag	1620
gatgtaaagt	ggtatgatct	ggggcttctc	cactcctgcc	ccagagtgtg	gaggccacag	1680

1740 tggggcctct ccgtatttgt gcattgggct ccgtgccaca accaagcttc attagtctta 1800 aatttcagca tatgttgctg ctgcttaaat attgtataat ttacttgtat aattctatgc 1860 aaatattgct tatgtaatag gattattttg taaaggtttc tgtttaaaat attttaaatt 1920 tgcatatcac aaccetgtgg tagtatgaaa tgttactgtt aactttcaaa cacgctatgc 1980 gtgataattt ttttgtttaa tgagcagata tgaagaaagc acgttaatcc tggtggcttc 2040 tctaggtgtc gttgtgtgcg gtcctcttgt ttggctgtgc gtgtgaacac gtgtgtgagt 2100 tcaccatgta ctgtactgtg atttttttt tgtcttgttt tgtttctcta cactgtctgt 2160 aacctgtagt aggetetgae etagteagge tggaagegte aggatatett ttettegtge 2220 tggtgagggc tggccctaaa catccaccta atcctttcaa atcagcccgg caaaagctag 2280 actetecteg tgtetaegge atetettatg ateattgget gecateeagg acceeaattt 2340 gtgcttcagg gggataatct ccttctctcg gatcattgtg atggatgctg gaacctcagg 2400 gtatggagct cacatcagtt catcatggtg ggtgttagag aattcggtga catgcctagt 2460 gctgagcctt ggctgggcca tgagagtctg tatactctaa aaagcatgca gcatggtgcc 2520 cctcttctga ccaacacaca cacgacccct cccccaacac ccccaaattc aagagtggat 2580 gtggccctgt cacaggtaga aaaacctatt tagttaattc tttcttggcc cacagtctcc 2640 cagaaatgat gttttgagtc cctatagttt aaactccctc tcttaaatgg agcagctggt 2700 tgaggctttc tagatctgtt tgcatcttct ttaaaactaa gtggtgagca tgcattgtgg 2760 tgtagaggca ggcattatgt aggataagag ctccgggggg attcttcatg caccagtgtt 2820 tagggtacgt gcttcctaag taaatccaaa cattgtctcc atcctcccg tcattagtgc 2880 tctttcaatg tgatgtggga aagcaggagg atggacacac cccactgaaa gatgtaggca 2940 ggggcaggtc tctcaaccag gcatattttt aaaagttgct tctgtactgg ttctcttctt 3000 ttgctctgag gtgtgggctc cctcatctcg taaccagaga ccagcacatg tcagggaagc 3060 acccagtgtc ggctccccat ccaaatccac accagcacct tgttacagac aagaagtcag 3120 aggaaagggc ggggtccctg cagggctgaa gcctaagcta ctgtgaggcg ctcacgagtg 3180 gcagctcctg ttactccctt ttaaattacc tgggaaatct taacagaaag gtaatgggcc 3240 cccagaaata cccacagcat agtgacctca gaccctgata ctcaccacaa aacctttaag 3300 3360 tgtgtgtgtg tctctgctgg ggaccctggc caccccctg ctgctgtctt ggtgcctgtc 3420 acceacatgg tetgecatee taacacceag etetgeteag aaaacgteet gegtggagga

gggatgatgc	agaattctga	agtcgacttc	cctctggctc	ctggcgtgcc	ctcgctccct	3480
tcctgagccc	agctcgtgtt	gcgccggagg	ctgcgcggcc	cctgatttct	gcatggtgta	3540
gaactttctc	caatagtcac	attggcaaag	ggagaactgg	ggtgggcggg	gggtggggct	3600
ggcagggaat	tagaatttct	ctctcttt	taatagtttt	attttgtctg	tcctgtttgt	3660
tcatttggat	gttttaattt	ttaaaaaaaaa	aaaaactttg	ctgatattta	taattttgta	3720
tcataagaat	gttttcctct	acagtatttg	tcatgccagt	ttataacaaa	aaaaaatgca	3780
gggattttat	ttctattgga	aacattacag	ctatgtttta	cttttggaca	gaattttat	3840
ttgtatagag	tgcttactaa	tgttaaatag	ttcagagtat	ataacattta	cattaaggac	3900
tcatggtagg	ttttagggta	aggagtttaa	aggaaataaa	tattcaaact	gggtctcatt	3960
gccaattttg	gtggaaatga	gtttgtgtca	tttcaattac	aaagataaaa	gtatgccata	4020
taatttattt	atatgaagat	ttatttttgt	agtgtacata	gtagtcatca	agtcttttga	4080
cagaagtata	tttttaaaga	atttatatgt	gatgaatcca	taatgtctgg	aactttgctg	4140
agacatgagt	gggcacagtt	ttcattgtaa	attacagcaa	ggaaagaaaa	tgtttaacag	4200
tgttaagaga	gtcagagcag	agtggatatt	catgcgatta	tgaagtgttt	attagttacc	4260
attggcgacc	tagcatgctt	ctcatttcaa	accttggaag	gtgaaaatgt	acaaactctc	4320
taaataatta	atgttcaaac	actgatagaa	attctaacat	gaataaaaaa	taatataact	4380
tgttggtt				•		4388

<210> 177

<211> 3813

<212> DNA

<213> Homo sapiens

<400> 177

tc tctaaggtga cactcgggtg cgcggcagca gcggcggttg caggagctcg	60
cc gggctccggc tccgctccag ccgtccgggg ggcgccgcgg cgcgcagagc	120
ecc gactccagcc aggagccccc gccccccgg agcgcaggag gaccccggcc	180
ecc aggegeageg eccageatet egetgeteet gtegtetaag egteggegte	240

300 gctagggacc tgcggaaccc ggcgctcccc tccctcccg cctcgcgtcc ccggcccggg 360 cggactggag actcgaactt gagcgggtgc ccgaaaggcc gcaggagccg cgggcggaag 420 geggeegeae gatggeegag gggeagggea gegetgggae tgggetggeg 480 gcggccgggc agccgaggag gaggtggtgc ggcggcgatg ccggcgcggg gaggaggccc 540 aggtcgcgca gccctggccc gagggttccc ggggcacggc cgctgggccc ccggtggagg 600 agegttteeg ceagetgeae etaegaaage aggtgtetta eaggaaagee ateaceaagt 660 cgggcctcca gcacctggcc cccctccgc ccaccctgg ggccccgtgc agcgagtcag 720 ageggeagat eeggagtaca gtggaetgga gegagteage gaeatatggg gageaeatet 780 ggttcgagac caacgtgtcc ggggacttct gctacgttgg ggagcagtac tgtgtagcca 840 ggatgctgaa gtcagtgtct cgaagaaagt gcgcagcctg caagattgtg gtgcacacgc 900 cctgcatcga gcagctggag aagataaatt tccgctgtaa gccgtccttc cgtgaatcag 960 gctccaggaa tgtccgcgag ccaacctttg tacggcacca ctgggtacac agacgacgcc 1020 aggacggcaa gtgtcggcac tgtgggaagg gattccagca gaagttcacc ttccacagca 1080 aggagattgt ggccatcagc tgctcgtggt gcaagcaggc ataccacagc aaggtgtcct 1140 gcttcatgct gcagcagatc gaggagccgt gctcgctggg ggtccacgca gccgtggtca 1200 tecegeceae etggateete egegeeegga ggeeceagaa taetetgaaa geaageaaga 1260 agaagaagag ggcatccttc aagaggaagt ccagcaagaa agggcctgag gagggccgct 1320 ggagaccett catcatcagg eccaeccet eccegeteat gaageceetg etggtgtttg 1380 tgaaccccaa gagtgggggc aaccagggtg caaagatcat ccagtctttc ctctggtatc 1440 tcaatccccg acaagtcttc gacctgagcc agggagggcc caaggaggcg ctggagatgt 1500 accgcaaagt gcacaacctg cggatcctgg cgtgcgggg cgacggcacg gtgggctgga 1560 tectetecae cetggaceag etacgeetga ageegeeace ecetgttgee atectgeece 1620 tgggtactgg caacgacttg gcccgaaccc tcaactgggg tgggggctac acagatgagc 1680 ctgtgtccaa gatcctctcc cacgtggagg aggggaacgt ggtacagctg gaccgctggg 1740 acctccacgc tgagcccaac cccgaggcag ggcctgagga ccgagatgaa ggcgccaccg 1800 accggttgcc cctggatgtc ttcaacaact acttcagcct gggctttgac gcccacgtca 1860 ccctggagtt ccacgagtct cgagaggcca acccagagaa attcaacagc cgctttcgga 1920 ataagatgtt ctacgccggg acagctttct ctgacttcct gatgggcagc tccaaggacc 1980 tggccaagca catccgagtg gtgtgtgatg gaatggactt gactcccaag atccaggacc

2040 tgaaacccca gtgtgttgtt ttcctgaaca tccccaggta ctgtgcgggc accatgccct 2100 ggggccaccc tggggagcac cacgactttg agccccagcg gcatgacgac ggctacctcg 2160 aggtcattgg cttcaccatg acgtcgttgg ccgcgctgca ggtgggcgga cacggcgagc 2220 ggctgacgca gtgtcgcgag gtggtgctca ccacatccaa ggccatcccg gtgcaggtgg 2280 atggcgagcc ctgcaagctt gcagcctcac gcatccgcat cgccctgcgc aaccaggcca 2340 ccatggtgca gaaggccaag cggcggagcg ccgccccct gcacagcgac cagcagccgg 2400 tgccagagca gttgcgcatc caggtgagtc gcgtcagcat gcacgactat gaggccctgc 2460 actacgacaa ggagcagctc aaggaggcct ctgtgccgct gggcactgtg gtggtcccag 2520 gagacagtga cctagagctc tgccgtgccc acattgagag actccagcag gagcccgatg 2580 gtgctggagc caagtccccg acatgccaga aactgtcccc caagtggtgc ttcctggacg 2640 ccaccactgc cagccgcttc tacaggatcg accgagccca ggagcacctc aactatgtga 2700 ctgagatcgc acaggatgag atttatatcc tggaccctga gctgctgggg gcatcggccc 2760 ggcctgacct cccaacccc acttccctc tcccacctc acctgctca cccacgcccc 2820 ggtcactgca aggggatgct gcacccctc aaggtgaaga gctgattgag gctgccaaga 2880 ggaacgactt ctgtaagctc caggagctgc accgagctgg gggcgacctc atgcaccgag 2940 acgagcagag tegeacgete etgeaceaeg cagteageae tggcagcaag gatgtggtee 3000 gctacctgct ggaccacgcc cccccagaga tccttgatgc ggtggaggaa aacggggaga 3060 cctgtttgca ccaagcagcg gccctgggcc agcgcaccat ctgccactac atcgtggagg 3120 ccggggcctc gctcatgaag acagaccagc agggcgacac tccccggcag cgggctgaga 3180 aggeteagga cacegagetg geegeetace tggagaaceg geageactae cagatgatee 3240 agcgggagga ccaggagacg gctgtgtagc gggccgccca cgggcagcag gagggacaat 3300 gcggccaggg gacgagcgcc ttccttgccc acctcactgc cacattccag tgggacggcc acggggggac ctaggcccca gggaaagagc cccatgccgc cccctaagga gccgcccaga 3360 3420 cctagggctg gactcaggag ctgggggggc ctcacctgtt cccctgagga ccccgccgga cccggaggct cacagggaac aagacacggc tgggttggat atgcctttgc cggggttctg 3480 gggcagggcg ctccctggcc gcagcagatg ccctcccagg agtggagggg ctggagaggg 3540 3600 ggaggccttc gggaagaggc ttcctgggcc ccctggtctt cggccgggtc cccagccccc 3660 geteetgeee caccecacet ceteeggget teeteegga aacteagege etgetgeact 3720 tgcctgccct gccttgcttg gcacccgctc cggcgaccct ccccgctccc ctgtcatttc

atcgcggact gtgcggcctg ggggtggggg gcgggactct cacggtgaca tgtttacagc 3780 tgggtgtgac tcagtaaagt ggatttttt ttc 3813

<210> 178

<211> 4041

<212> DNA

<213> Homo sapiens

<400> 178

60 attgttctag caatttattg ttacaaaaca gattgctgcc atcaatttgt ctcaggtcct 120 tctagcacat ctgacaggga ctagtgtcta gagccatgag gacagagacc agaagggaca 180 agaaggagtg ggcagaggga atggaaggta gagttaggcc cagagagccc caggctgctg 240 cccagacctc cacgcctgtg ccggatgtgg tgttggcatc catagcagtc tcgcaaagtt 300 gttctcattt tccaaataag gaaactgagg cccagggaga ggtgaagtgc tgcaggggat 360 ccaaccaggc gccggctcag tgcctcctag aaagaggagt gtgggcacgt ttgcaggatg 420 cctctctgtt ggaatgtgcc tgttttttta atgcttagac gtggattatg gcttttgggg 480 aggaagacta cagaggtaaa ggccattctc atcgcaccgt atccagggtc cacgctggcc gtgatcccct gcatgaggtg cttgccaggt ttctctaccg taaagttact ctttttgccc 540 600 cctttcctta ctgtactctg ggagaaagtc gctgtgtgca gcccatgcct aatgagtggg 660 gaattttgct cataagtggt ttgcattctg cacaagggat atgtctcttc accccatgta 720 ttaattcatt catatcacca agaactcatg ggttataatc ccgtgttact tagttttgtt 780 cgaatgtttc cagctcaggc ccttaggagc tcactaagct cctatgtcct gtttgcatac 840 cctgtcattg tggggttttg ctgggttctg tgtgtgttaa acactttcct actttctggc 900 actacaagat actccaggct catcttgtgt gtttcgtacc gcagccctaa aatcagccat 960 ttctccaaga agccctcgtt ccttttattg gagagagaga ttagaaacca tgggtgctgg 1020 gtgtgttcat tgcttctggg gtgtctgtct tttgggccat ctcatctgac gaaaggatat 1080 atgtgtttct actaaccctt gtgtaaatat gcacctataa acatttccgt gtatagccat 1140

1200 taagtcgcac tccaatggtg agcgtggctc ccaccatcca tttgcttaat tgttcagtct 1260 cagtctatgc ctataacagt atctgaatcc tttacttgaa cttccatggg aaacatcttt 1320 atcaattagc gtatagtgtt tctgtgcagt ttggtaggtg tctttttaag atcctctctc 1380 taaccttggg actagaagta gaatttaggt aaaaattatg aggttgaatt aaaaccatct 1440 tcagcctctt ccccacaacc catgttgtta tcaattaaat tctgaaattt tttaagatgt 1500 ccagtaatgt aacatctaag tttagcccct tataaacagt tatggtatca taacctctta 1560 aattagetta tgtaaetttt tgaetttgee ateaetaaca taatgettat ttteteecea 1620 aagaaaaaag gtttggtatg aaagtccttc cttgggttct cactcggtga gtataagcca 1680 tgagccactt tataatcttg atgggagtga gggtttaaaa gttggcaaaa ctcttacctg 1740 gaggtctttc catttctgta ttggagggga tagtgtctat gtggatgcga ctggatgcca 1800 ttggcaacat ggagttttga tcttttcaaa aaaaaatgta ctgacattaa tgttttctgg 1860 aaagtcatat cttttatcaa attataatat ggtaatatcc attcagtttt tagtgtgtgt 1920 gtactgtaaa agtttataca atatatggct cccattctga aaaataaata catcacgttt 1980 ccaaaaaatt actgaattat tccctttagc acggtgaact ttatggtatg tgaattatat 2040 ctcaacaaaa acttttttg agaaaatatt tactggcagt acttttaatc ttggagggtt 2100 accaggtaaa atttaaaagg atcccggttt ataaaacttt atcttaatga aagctgaggc agetgagagt gatagetget gttgatetgg ttgeceatee ageceteece cageceetge 2160 tgtgtgactt ggtgagtttg gagttgtaac gctgcccttg gggtgtgctc ttcttcttga 2220 tggagactta caaaccatcc aagttggaat tcctcatgag gagcacctca aagaaaacca 2280 2340 ggaaggaaga ccatgcgcgc ctgagggccc tgaacggcct cctctataag gcactgacag 2400 acctgctgtg tacccctgaa gtgagtcagg agctgtatga ccttaacgtg gagctctcca 2460 aggtaggctg tgtggccaaa gagaagaaat gggttgagac agcaggcctg gcacttactt 2520 tacctggccc agtcttgcct gacaattaaa aaaagacgct ttagactggg cgcggtggct 2580 cacgcctgta atcctagcac tttgggaggc tgaggcgggc ggatcacgag gccaggagat 2640 tgagacgatc ctggctaaca cagtgaaatc ccatctccac taaaaataca aaaacttagc 2700 cgggcatggt ggcgggcgcc tgtagtccca gctactcggg cggctgaggc aggagaatcg 2760 cttgaaccca ggaggcggag gttgcagtga gctgaggccg cgcctctgca ctccaccctg 2820 ggtgacagag cgagactccg tctcaaaaaa agccacttta gcacttatga agtcttagtt 2880 ctgggttgca gaaatagaaa tgatgctcag tctggtcatt ggagccctgg agacagatgg

2940 tgagtgtctg tgctgtgcag aggcagatgt ctcactgcaa ggtgggagtc ctgtgaccaa 3000 acagcgcctg gcacattgtc agatagtaga aggtctaagc ctgccgtggg aagaggatgc 3060 atctgcatgt acctcagtac agaggtacag gagatgactt cctctgaccc actcagtgag 3120 ttgtaaggag aaaaggcagc atcgagcatt tttgattagt gtctcagggc aagtggctgt 3180 gaggcaagcg tggggtcagg gttccggttt ggttctgcaa accaggtggt ttggtttgcg 3240 ggtcctggtg aagaggggg ggaggttttg gtttctgggg ccctacttca cctggggaca 3300 tggtgcggca gcaggaggtg gcctccagca gcatgccaga gccctggctt gggtgggagg 3360 ggcgtctgca gctgtcgttt tcatctcctg gatgttgttt gtcttgaaaa accatgtaag 3420 ctaaaaagtg acctgtggag gggcggggtc tcaggtttcc ctgactccag acttctcagc 3480 ctgccgagcg tactggaaga caacgctctc tgctgagcag aacgcacaca tggaggctgt 3540 cctgcagaga agtgccgcgc acatgaggtg atgacctttg ctttctgaat gtacttgctt 3600 tttgctcata ccctaaattt ctcagctgtt tcacttgtag gtggacttga acttttcatt 3660 gagtattttt gcttttaaag aaaattttgg aggcattttc ttgaagttca tagtataatt 3720 tgcatttttg tataagctat aatgtaggtt agcatttatt aaagtgtgcc aggatcacta 3780 gggatctgga gatcctgtca gggagttcat tagggtaaga cgttatttca cctctcctgc tgtgttgaca tttgcactga gggtacagaa accatgaggg aagactgctg gtgccatgct 3840 3900 gccagccagt gctgtagggg cgccatgcca catgcctaga gtaaaagaca atgttacttt 3960 tacttaagaa tatcccagat gaggctggac atggtgcctc tcacctgtga tccccgcaac 4020 tcgggatgcc ggggcgggag gatcgcttga ggccaggagt tcgggaccgg tctgggcagg 4041 atggcgagac cctgtctcta c

<210> 179

<211> 3529

<212> DNA

<213> Homo sapiens

<400> 179

cttcaagtga gccactcctg gcccaattcc tgtctcccgt tggcctatag aggccaagcc 60

120 tctgcctcat gatggcctct gcaggtcaag ctcctcctcc tggttccgtc tacaggccca 180 acacttecet caaataaact ettetgeeca geteetgtee ageteaegge ageeaetgte 240 ggcatgaaaa ttcctcaatt caagctctct aggcccacct tctgcctccc actggcctgg 300 acacgeccag etecaacetg acaatggtet etacaggeec ageteategg getetgaggg 360 acctetecag gecaagetet taceteaegg aggettetee aggtegttte teeetgtett 420 caggcagtgg tgacaggtca gctcctcctc cacagtggcc tcgtttgggc aggtcctgcc 480 tettgeagee teteaaagee eageteetge etetgagtgg ettetgegea eecaaatgte ctccagtcag cctgtcctgg ctgagctcct gcgacctggc tgagctcctg cctcctgtcg 540 600 gcctctataa acccagcctc tgctgtatgg tggcttcttc aggcccagct cttcctcctg 660 geggtgtata eaggteeaac teetgettee caatggacte tttaggeeag geteatgeet 720 tacggcagcc tttcctggcc cagcttttgc ctgttggcat accctccagg cccacaatgt 780 actcagatca gccactccat tcccagctct tcttcctggc tgtgtctaca ggcccaactg 840 ctgcctcaca acaccctctt ttggcccagc tcctgcccag cacctggtgg cctctatatg 900 ccccagactt cttaaagtca actttgctag gcccaccttt ggcctcccag cggctttgac 960 aggaccaget ettgeeteat ggeagettee caacgecagg tttetgeetg cattgtggea 1020 teettgatgg acceaactet tgetttatge eggeetteee acaecaagtt tetgeetgee 1080 tcatggcagg atccgatagg cccagctcct gcctctaatg gcctggttag gctcatctca 1140 tccctcaagg tggccacccc agatgaagct cctgcctttt ggcagccttt agaggcccag ctcatgcatc tcattgcctc ttgaagccca gctcattcct caaaacggcc tatccacgcc 1200 1260 cagettttcc ctttggtggc ttctccaggc ccagaaattc ctcagttcgg cttcgcaagg 1320 tgaagttgct gcctcctgt gccttctcca ggcccagttc ttcctcccag ctgggtctac 1380 agteceatet eetgaeteaa aacaacetat tttggetegg eteetgeeca geaeetggeg 1440 gcctttgtag gcctaaagct tcctcaagtc aagcgttcca ggcccagatc atgctgccca 1500 ggggccttca caggcccagc tactgcctga cgatggcttc cccaggccca ggtcttgcct 1560 tecceagee tecegaggee cageeettge etcacagttg ettteccagt ceaegttaca 1620 gcctgttacc cgacggcctt gacagaccaa actcttcctt cacactggac agtttaggac 1680 aageteatae gtetteeage eteteeaggt caageteetg ceteacactg geetetatag 1740 gcccaggtgc tgaatcgcaa tggtctgttt aggtccatct catgcctttc tcagactctc 1800 caagegacga tetggeetga caettgette tgtgggeeat gtgateaete acaetggeet

1860 ctttaggatc aggggatgcc tctccacagg ccgagatcct gcctgttgta ggccccttca 1920 ggatgcgccg ctgcctgaca gtggaccctc caggcctaga tgttacgtga tcatggcctc 1980 tgcaggtcaa gaatttaaat tttcgcagcc tctataggcc aggctactgc ctcctgataa 2040 tggcttctgc aggcccaaat cgtcctgaaa taagcctcgc caggaacagc acgtgtgttg 2100 gatgcccgaa caaccatagc ttctcccgca cagtggccca tgggggccgg gctcttgcct 2160 cagcctggcc acctcaggcc cagttcttgc ctgttggcgg ccgctccagg cccggctcct 2220 geceetegge etecteteca ggeceagaac tggttecegt eggeetetee aggeceaget 2280 ctcccggcca cctccacggg cccagctcct gcctcacgac aaccacgttc ggcccagctc 2340 ctgccagct cctggcagcc gttgtaggcc ccaggcttcc ctgcgttcag gcctcccgga 2400 cccaccttcg gctttccggc ggccctgaga gacccggctc ctgcctgcca gcggcctctc 2460 ceggeceage tgeggettea egteggeete eeeaggeeae gttteegeet geeteaegge 2520 agecceggea ggeccggete eegectgeeg ggggeetett gaggaggete atetegtgee 2580 eggeegege eteceeagge eaggeteetg eetgeeggea ggegeeacaa geeeagetee 2640 tgcgtcccga aggcttctct aggcccggct cgtgcctcgc tgcggcctct tgaggcccag 2700 cttttccctt gtggtggcct ctccaggccc agaacttcct caagtcggcc tcccccggtc cagtggctgc ctcccggcct cctctccggg cccagctctt tgctcgcgtc tgcgcccgtg 2760 ggcccagctc ccgtctccaa acagcctcct tcgactcggc tcctgcccag ctcccggcgg 2820 ccttcgtagg cccgaagcct cctccagtcc agctctccag ggccgcgtct tgcctcgcct 2880 egecteect cacettgeet cacetegeag cageetttee aggeecaget eeegecteec 2940 3000 ggcggccttc ccctgccacg ctcgtgccgg cctcccggca gcctccacca gcccggctcc 3060 tgcctcacgc tggcccctct gggcccagct catgcctcgc ggtggcctct ccgggcccag 3120 ctcccaccca gcctgacggc gcctcccggc cccaagctgc cttcctcgat gtggcccaaa 3180 gtggcccaaa gcgtcccaaa gtaggcctcg ccaggcccac ctcctgcccg gcgtaggccc 3240 tgaggggcgc ggccctgcc ccatactggc ctcttttggg ccctctctta caccagcccc 3300 tgtctcagga ttgtctcttc acgcccatct tctgcctcat agtggtcact caaggcctcg 3360 cttttgcctg atgattgcgt tttctggttt tgctcttgcc ttgtattccc ttcttcggga 3420 tacagetttt acgtetteca tggtgaacet cateaaggag actaaatett eeetggtetg 3480 tcattttttt cacttcacac cagagtgcct tgggaaaacc ccatctcttc ttttaacctt 3529 gagagtggat ttctgacgaa ttgataataa attttttctc tgtggtttc

<210> 180

<211> 4204

<212> DNA

<213> Homo sapiens

<400> 180

60 ttatccctaa gccatttctc tcaagttaac actacttcat ttacaggttg ggaaggattt 120 ttaagtagat gtggttccct ggccttccta tgtctcaagt tttaggtttt aaatggaaat 180 gtttgaaaat catcagaaac agcccagaga ctcagaaacc actgcgaaac tatacaaccc 240 atttgacttt ttttctgcag ccttcctgat atggccggag tcttgaccct cttggaagga 300 gtttcagccc ctgaaactcg gaatgtagac actacactga ctttgaactg acatcccgta 360 tgttgtcctg atgtctttct taagtccctc ttggatgaca tttctaaaat ataaatgttt 420 ctctgccagc tctgtctgaa aggtcatggt tttggagatg gtcccccaca ttctcagcca 480 atttctcagg ggtaccacag gccatacagg gcaaaggaac tggtggtctt gcacattata aaatgcacag tcacagatat gggaagccca cctggaaaaa attcatgtat gacccaggta 540 600 gaaggcacaa aaactatccc cacaccaaca aatttgtttg gttaagctca atgtgtgata ccgatttttt ttttttttt tgagacagag tcttgctctc ttgcccaggc tggagtgcag 660 720 tggcgcagtc tcggctcacc gcaacctcct cctcttggat tggagcaatt ctcctgcctc 780 agecteccaa gtagetggga ttaeaggeae gtaetaceae acceggetaa tttttgtatt 840 tttagtagag acgggttttc accatgttgg ccaggctggt ctcgaactcc tgacttcaag 900 tgatctgccc accttggctt cccaaagtgt tgggattaca ggcatgagcc accatgccca 960 gcatgtgata ctgatgaaag catgctcccc ttaaggaatg cgaaggtgga tggagtgaac 1020 agcgtcccca gggcacatgt caataaaaac aggttaggcg tctttatttc tcagcattat 1080 ggtagaaggg accagccagc catcagtttt tagcagtgat cagggtagga agacactttg 1140 ccctgccttt taggggccag gttggaagtg agtatgactt ggaagaaatg caaggctgtg 1200 caagaatcaa ttcacaccca tcaggggcat ttggtgatgg tcatgtgcag tactgtgaca 1260 atgtagttga caggtggcca ttccttcctc ttttctgcac attctttcca gatggatggg

1320 gctgcttctg ggcggcccag agtgttgtag gttcttgggg gagaggaaat gggcctcaac 1380 tgctacccca agagetetgg aaatggcatt ggcatgggta tgctccacgg ctcagcette 1440 tectgttece tgggeetect gtegteatea egeaecetga eetgggegae ttgeataaca 1500 ttacagaagt ccaaccactg cagggaggca ggtggtggca ctcacgaaca tgttcatccc 1560 ctctctgcgg ccaccactcc ctcccactgc tccttgtcag cctctctttg gcagagcgtg 1620 gccccgctgg gccttccgag tgtttctgga ggaatgcatt gatacaaaag gaggaggtta 1680 aaagtttgaa aaccgtaggt gataaaactg ggaactgctt ttgcttcatg tacaataaat 1740 atcttccttt ttatgtttct cattttttag gaatctgaag ctttattcct caaggcaatt 1800 aaagcaaatc caaatgctgc aagttaccat ggtaatttgg gtaagaaaaa tgttcaactt 1860 gaatcgtgtt gaaattttgt tactttaatg aagtgggtgc atgtctataa aatcaatgtt 1920 gggagagtag ttttttcaa agctagcctg gctttaaaat gtggttctgt tattgcatta 1980 aaaagatagc aaagtgatag ccacacttac aaatctcaat tgcatgacca gaacagcccc 2040 aaagtttgcc cactctatta ccttctcatg atgaaactca gattgtcctt ctttgtgtta 2100 agctgagaag ggtgagattg gatcaagaga atgaggctat ggttgcgaag agttctccta 2160 gtaaattaat cgtaggtact ttggaagctt gccattgaac ttacctcctt ttccttcctt 2220 cttacagagt agacettece ettecageet ggtettetge tttatateet ettatgeett 2280 ggctaaaatg catttataat catttattcc ctagaattca tttcttgcat ttgtatgtct 2340 ccatagttaa gatgtttaga gcatagcatt gttgatgttt agaatgctca cagaaatgtt ttttcaccaa agctgttctc taccaactct gaagcttctc ttcacaaaag ccaaaaagcg 2400 2460 tccacagatg ctcttctgcc catatagaaa gttaatttta ctaacaaaat cactgtcatg 2520 atcagagget aatcatecta atgattaggt ttaetgtaac tateatttta gggteagete 2580 ttgatatcag aggccttttt tctaaatgga cccaaacaag ctattacttc cccaaatggt gtaaggaaat atttaaaata aacagctgaa cttctgcata gtcagggctc tgggcagtgc 2640 2700 ctagcatcca tcacccccac ctcccatacc cagccttgct tcctggaaat ttcatggcag 2760 cactaagaca ttgcatgtac tcttcttttt gcttctttat gtaataatgt tactataggc 2820 agatgtatct tatctagtgc tatgaagagc cctaggagta actggcagta aatggataat 2880 catcagggag tgtgattaca ataaatagag ttttcagtac aaacaatatt gtttcataca attgactttt gaaaactgtt tgcataggat ctgtaatatt tctttgtcca agagggtagg 2940 3000 · aatacggcac gttactcaga agcattccca gtgaaattta tctcctgcta tttcagctgt

3060 gctttatcat cgttggggac atctagactt ggccaagaaa cactatgaaa tctccttgca 3120 gcttgacccc acggcatcag gaactaagga gaattacggt ctgctgagaa gaaagctaga 3180 actaatgcaa aagaaagctg tctgatcctg tttccttcat gttttgagtt tgagtgtgt 3240 tgtgcatgag gcatatcatt aatagtatgt ggttacattt aaccatttaa aagtcttaga 3300 catgitatti tactgattic titctatgaa aacaaagaca tgcaaaaaga ttatagcacc 3360 agcaatatac tettgaatge gtgatatgat tttteattga aattgtattt ttteagacaa 3420 ctcaaatgta attctaaaat tccaaaaatg tcttttttaa ttaaacagaa aaagagaaaa aattatcttg agcaactttt agtagaattg agcttacatt tgggatctga gccttgtcgt 3480 3540 gtatggacta gcactattaa acttcaatta tgaccaagaa aggatacact ggcccctaca 3600 atttgtataa atattgaaca tgtctatata ttagcatttt tatttaatga caaagcaaat 3660 taagtttttt tatctctttt ttttaaaaca acatactgtg aactttgtaa ggaaatattt 3720 atttgtattt ttatgttttg aatagggcaa ataatcgaat gaggaatgga agttttaaca tagtatatct atatgctttt ccccatagga agaaattgac tcttgcagtt tttggatgct 3780 3840 ctgacttgtg caatttcaat acacaggaga ttatgtaatg taatattttt cataagcggt 3900 tactatcaat tgaaagttca agccatgctt taggcaagag caggcagcct cacatcttta tttttgttac atccaaggtg aagagggcaa cacatctgtg taagctgctt tttagtgtgt 3960 ttatctgaag gccgttttcc attttgctta atgtaactac agacattatc cagaaaatgc 4020 4080 aaaattttct atcaaatgga gccacattcg gggaattcgt ggtattttta agaattgagt tgttcctgct gttttttatt tgatccaaac aatgttttgt tttgttcttc tctgtatgct 4140 4200 gttgacctaa tgatttatgc aatctctgta atttcttatg cagtaaaatt actacacaaa 4204 ctag

<210> 181

<211> 4614

<212> DNA

<213> Homo sapiens

<400> 181

60 ataaatatgg tccccctatt tattctgtag tcacaatcag caccatcacc cccacacgcg 120 ccttcatgac tgggtatcat aaaaccaggg ttaggggcga aaagagacag ggagatggaa 180 aaaaaagttg gagaatttat gtgcaatcct gtcaactgca gatgacaaaa gtaaagccac 240 agatttcccg catgcttcgc agaatgggaa atatttttct cgaggactgg gccgctccca 300 ccccactct aaccctccc tccccacat taattccaac ctcagaagtt cagatcaagg 360 gaagggggca aagggaattc cagagccgtt ttcttgactc cagtttcttt cctctttgcc 420 ttcctatggt ttccccttcc ctaggtatcc tttgaaacaa aaaacacaca agtcctaatt tttccaacct cctctataaa ggaggtaagg gagattcatc gtcttttcag cagggggtgg 480 540 gtgggtggtg gttagacgct tccaccccta tggagtggcc tgggcacaca gataaacatc 600 tgcctgtcgt ccacagactc aatatacatt gtatacttgg agtagggagt gaattcaaaa 660 caacaagaaa tacagacaaa ggaacaccag agaggcttca gggttcaatg ctgtgaggcc 720 teccegggee ttttteccae eccaaeceet gtagaggegt tgeetgtgta gtettgtagg 780 tgcttgggct ccgggtgtag agcgagctga tgacgtcact gagtcgaagc ctctaaagtg 840 gagagacctg acctaggcgg ccgtgtctgg gtgaattgcg tcaattcggt gatggtcttt 900 gttagtaatt gcacaatgtt cgtcttattt ttaaaaaggt gtaggaggaa ctagagaaat 960 gatccacaat aataaatatt gtaaaggcaa acacccagtg ggtctagatt gaatgtgtat ttgatatgct gcgtatgaag tccccagaaa aaaagaacca gatgttgaag gagggggcga 1020 1080 gaaaggcctt tgcaattgcg gccaaaggga aaaaaatcag gtcctttttc cccctcccc ccatctgcag ggagaatgcg gctgccccaa aatcctagct aagacttgaa gaagtaaagg 1140 1200 aaaataaaat aataaagctt tggcagactc atctcagttc cctaagaatt tgaaaatcag 1260 tgtgtgtgta ttggggaggg aggtaggttt tctctctggg gagggcccca caaaagacct 1320 caattttaaa atctgagccc agcaaacaat tcctggccct gccactgatg aattttcttc 1380 tgctctatcc tcttcagacg caattagaca attagcactc ctgcccgcag cccccacaac 1440 tttcatcaga tgaaataaca tcctaactgg agtggaacta ttttcatgac tccaaataaa 1500 aaatgcagtc ttccaaatac acctttagtg aatccgtcct tgagaaaggg ggactgaaat tectgeetae acetaataea atagggeeca gaggetgeet gaeecagege gggeagtegg 1560 1620 caacaaacaa ctccttccca tagtgaaaca ccaaccccac cactaaggtg cagagggcat 1680 ttgcggaact tgctgcttct gccaatgttt aaaaagtccc ccttcctgaa gtaggacttt 1740 tttctttgtc ttctgtttct aagctcccca ttttgctttc tatctcaatc taaaataatg

1800 aaataaaaca aaatgtttgg tcggccacta atcgccttta atttttcatt tgcttgttac 1860 agatgtccac cgcgttgctc gcaaggtaat ctcgctccgc gcagctgagc gccccgcatc 1920 tegegeetge tacateaaag ggeeegegea caaageagtg tttettegee aeggtgeate 1980 ttcatggtaa gttaggattt ctatggcaat gtgcaagtcg cactgaaatc ctgaaaggcc 2040 aagcctggag cccgtccagg cttttcatta aggacataat atttacgtct aacagacctt 2100 ttttcttgtg tatacaagta tatatttttg tttgacgcgg actaaatcat tttcatttaa 2160 tttccggtaa acaaaaccca cgcgaatggg cacttgtacc cgatcataat aaaaatggat 2220 aataatgtga aggaagaaaa gagccgcttg aatcgccgct cagccccctt tgtttctgct 2280 ttctgcggtg atcagagggc gcgtttgggt ttgatggcga gtttctaaag gcgaggaaat 2340 ggtttgtaag aggggaaaga aaaggagaaa ggtctaatca agctcgggtt gttcaaagag 2400 tcgggttttg gggttgaaag tgtgagtttg acggtgcatc agcatgccgc gttaggctcg 2460 ccatggaaat acgcgcgggg agcggccgct tcaaaggcgg cacacttcac tacagacact 2520 ctattaagat acatttgcgc tgacctttgc tttcacgcca tttaatactg tcactgcgct 2580 ctccagtata tacttccttt ctagaacccg acttgcccac gtttaggggt tcactctgca 2640 ccctgatgtg ggaggctttg gcgcagggga cactttcagg aaagggagga gcacaaggac 2700 tctgtgcatc ttgactgcac cccaaagagg ctccaggatc aggagtgaaa gattttaaag 2760 cagcetecga agettaacaa atgageatte caageteagt tttgtgcaaa tegeetttet gactettgag taggatggag gettaaattt aatggegact tggggggaag ggagceacce 2820 tgggggagtc tgaggagttc agactgtgcc cttgggaatt tccactctgg ctttccgtgc 2880 2940 cactettett cetttecate ceaaaagtet ettgeggeee etgaaacttg tttettteta 3000 aggcagggtg tgtggtaccc ttaggcctgg actagtccta gatgcaaact caagagccca 3060 aggccaaggg gatgtgggga agatggcagg aaagttagaa gtccatgttc ccttaattgt 3120 cttgttgttt attttatcca agtaccccag tgaatagggg aaaaataaac acagtgaaaa 3180 aaaaaatcaa acagtggagt cttctttagt gccagtcctt gtggttgaat aaaaaggatg 3240 gtccgctttc tattgagctg agaaatcttt gaagtgggag ttattatctg agacattcct 3300 gcttgtcgtc ctaacaacgc tgatgaaacg taaaaggttc tttgtcagcg atttgttctc 3360 ctctctgtca aactccctct gccccgttag tttcaaaccg tttctaaaga gataaaaatc 3420 aaacttettt taaaacaata teeacacaet geateaatae ataaetttag gtetaagtet 3480 tgctaaggga taaacaaaag caatgcctag acatcagggt cagggcctgg tctggtgaag

3540 tatgcagaag ttggggggcc ctcgggacaa gctttgggac atgaggaaaa gaatgcagag 3600 agggtgcaag cagaatacat accctaagtc cataattgtg tttctgcttc tttctgctct 3660 ggtttgcatt caatcagccc aagttgggtc acatagatgg gtttcctttg ggtacccctc 3720 aggeteetaa tattettgee eaggateett ggaacttaag aatgeageea ageaattgtt 3780 aatateteet geteetteaa ageeacetet getaaaaata gaeeeattgt gtgtttette 3840 tcactagcag caatcaacaa gccctttctg ccgttaataa gaaggagaat agctgaagga 3900 gagagatatt ttattaattt cctgtttcct tcagaatctt ggcaattgaa gtttagaagg 3960 tttggtctac aacacagtga tcgaaaatgc atgtaaatgc ccatccttcc cttcattcac 4020 gtgtgaagtt gttcatttta tattgtgccc agcaaagaaa ctttcaccca gttcaggttt 4080 ccccaaaact cctgtggtgg ttttaaaggt ggtttaaata aataaggatg tgctggtccc 4140 cctactctgt gtgtgctgaa taaatggctt gtaaagaagt ttttccaagc tgtaacccat 4200 gctgttatta tagttgctgc aaaatgttct tcctgatatt gattttattt gttaactgaa 4260 ggtctccata tgtttgttta tattgctaat ttatgagaaa atgtaataat tgcaatgaat 4320 gtgaattata cagacaggca aacattttgt aatcataatt cacatataca caaaagcctg 4380 gctgaaatct ttagactatt tgtaccctct ctacccacac tgtttgtgat ttatcatctg 4440 tctctttagt gtcagttaaa ttatgaacta acttgaaaat aaaagttgtt tgactgaaag tgattgttga atgaacaaca aagttgaaag ccatggcttg atcttgtaaa tatataaatg 4500 taaatgatat taaatctgtg attccttttc cctccaaagg cttttgtgta catggcgctg 4560 cattiggcta tittcttigg aaataaataa tgtgatgttt ctcttcctct titig 4614

<210> 182

<211> 4442

<212> DNA

<213> Homo sapiens

<400> 182

ttgtctttct gtgcctgact tatttcactt aacatcatat cctacagttc catccatgtt 60 attgtaaatg acaggatctc attcttttt gtggctgaac agtactccat tttgtatatg 120

180 240 tgtcgcccag gctggagtgc agtggcggga tctcggctca ctgcaagctc tgcctcccgg 300 gttcacgcca ttctcctgcc tcagcctccc aagtagctgg gactacaggc gcccgccact 360 acgcccggct aatttttttg tatttttagt agagacgggg tttcaccgtt ttagccggga 420 tggtctcgat ctcctgacct cgtgatccgc ccgcctcggc ctcccaaagt gctgggatta 480 caggcgtgag ccaccgcgcc cggccacact ttctttattc atttgtctct cgatggacac 540 ttaggttgat tccaaatctt ggctattgtg aataatgctg caataaacat gcgattgcag 600 atatttcttt gacatactaa tttcctttct ttttggtgta tacctagcag cagaattgcc 660 ggatcatatg gtagttctgt ttttagtgtt ttgaggaacc tccatactgt tctccatagt 720 ggccatacta atttgcattc ctactaccag tgtacaaggg ttaccttttc tccatatcct 780 caccagcatt cattgttgcc tgttttttag ataaatgcca tttttactgg ggtgagatga 840 tagctcattg tagttttgat ttggatttct ctgatgatca ataatgttga gtaccttttc 900 atgtatctgt ttgccatttg tatgtcttcc tttgagaaat gtctattcgg atgttttgcc 960 cactttttaa tcagattatt gaatgttttc ctattgactt atatgacctc cttatatatt 1020 ctggttatta atcctttgtc gaatggatag tttgcaaata gtttctccca ttctgtggga 1080 tgtctcttta cttcgttgat catttccttt gctgtaagaa actttttagc ttaatatgat cccatttgtc catttttgct ttggtgcctg tgcttttggg gtattcaaga aatctttgcc 1140 1200 cagatcagtg tcctggagag tttccccaat gttttatttt agtagcttca tagtttgagg tcttagattt aaatctttaa tccattttta tttgattttt gtaggcaatg agagataggg 1260 1320 gtctagtttt attcttttgc ttatggatat gtagtttttc cagcaccatt tattgaagac 1380 actgtccttt cccccaatgt atgttcttgg cacctttgtt gaaaatgagt tcactgtaga 1440 tgtatggatt tctggattct ctcttctgtt ccattggtcc atgtgtctgt ttttatgcca gtaccatgca gttttggttc ctatgactcc atagtataat ttgaagtcaa gtaatgtgat 1500 1560 tectecagtt tegttttett getgagggte aggttttttg etattetggg tettttgtag 1620 ttctgtataa attttaggat tattttttac tatttctgtg aagaatgtca ttggtatttt 1680 gatagggatt gcatgtaatc tgtagattgc tttgagtagt atggacattt taacaatatt 1740 gagtetacea atecatgace atggtatate tttgtgteet etttgattte ttgcattagt gttttatagt tttcattgta gagatctttc acttctttga ttaagttatt cctaggtatc 1800 ttattttatt tatagetttt gtaaatacaa ttaetttett gatttettet teagattgtt 1860

1920 tgctattggc atatagaaat gctattgatt tttgtctgtt aattttatat cctgcaactt 1980 tactgaattt gctttttagt tctaatagtt tttggcagat ttttttaggt tttcctaaat 2040 ataagatcat attatccaca aacatggata atttgacttc ttcctttcca ttttggatgc 2100 cetttattte tteetettgt etgattgetg tagetggeae tagettette tttteteeae 2160 agcagcetge ettagaaaca tgaacactet ttettttgea gttttaaaag aaggtagaca 2220 gctgacctat gagaaagtga acttgagtag cattagggcc atgctgaata gcaatgatgt 2280 cagcgagtac ctgaagatct cacctcatgg cttagaggct cgctgtgatg cctcctcttt 2340 tgaaagtgtg cgttgcacct tttgtgtgga tgccggggta tggtactatg aagtaacagt 2400 ggtcacttct ggcgtcatgc agattggctg ggccactcga gacagcaaat tcctcaatca 2460 tgaaggetae ggeattgggg atgatgaata eteetgtgeg tatgatgget geeggeaget 2520 gatttggtac aatgccagaa gtaagcctca catacaccca tgctggaaag aaggagatac 2580 agtaggattt ctgttagact tgaatgaaaa gcaaatgatc ttctttttaa atggcaacca 2640 gctgcctcct gaaaagcaag tcttttcatc tactgtatct ggattttttg ctgcagctag 2700 tttcatgtca tatcaacaat gtgagttcaa ttttggagca aaaccattca aatacccacc 2760 atctatgaaa tttagcactt ttaatgacta cgccttccta acagctgaag aaaaaatcat 2820 tttgccaagg cacaggcgtc ttgctctgtt gaagcaagtc agtatccgag aaaactgctg 2880 ttccctttgt tgtgatgagg tagcagacac acaattgaag ccatgtggac acagtgacct 2940 gtgcatggat tgtgccttgc agctggagac ctgcccattg tgtcgtaaag aaatagtatc tagaatcaga cagatttctc atatttcatg acacatgtga agaggcatcg tggacttttt 3000 3060 tctactcaat tccagccaat gttgaaaaga aaaagaaaaa aaaaactctc taatcagttg 3120 tacacacatt gaaacttata gccatggcca gattttatgc taaaaatggt agtttgtcaa 3180 agacaaaatt ctcttagaat ctaatccaac ttgccagccc tgagaaaatc ccttttaagg 3240 ccaaggaaag ctgaatgcta gcagccaggc ctgtggtact tccatgagaa accatagcag 3300 acaatgccct cccaagtact gaaatcacac tggaatcccc cttgttgggt tcatttgatt 3360 gtttaacaca ggatgtgttg tgtcattctg aagtttttat ttggggcaga agtctttatg 3420 gagatgtaaa tgacagcgtt tctgggttat gcataacttc tcactggtca gagacaccgg 3480 tgtgtcaagc atggatattg cattgcaaga cttgaatcta taaaaattag aatcacacag 3540 tcagtactac aagcaaaaca gagaacctga aaaaaggtgc acagactgta agaaaaaacc caagtttgtg atatttcagt gattccaaag aacattctag gttttttgtt tgtttttttg 3600

ttttttgggt	tttttttt	tactgcagaa	aattggtggt	attttcacat	tcatagtgtt	3660
tctatccaat	ttcagtaccc	acatttaatg	aggaaaaaat	gttttaccaa	tgaaggagga	3720
attcttaaat	tagctgtaat	gttaggttgg	agaaaatttg	gtatttaggg	tattttcaag	3780
gtaccatcaa	atcagatttc	tgttttttg	ttaaaaaaaaa	tttttttaat	cagtattgtt	3840
tttacaagta	atatactttg	aaactcttga	actaatagtc	tcaaaaactc	tagaggacag	3900
tctgagaaca	cgtatttcta	ttgttctaaa	taaatacatg	tttttgaata	gttcaatcat	3960
gaattattga	ctatgtcttc	atcaaaagtg	ttaatccctc	tcagggtctc	tggtgaagac	4020
cttcaagagt	ttggtttttt	ctcccaggaa	attggaaggt	agaattgtaa	attcatagaa	4080
cttcttttat	aatggtgtac	ctcagcagct	gcctttcaat	ttatgccaag	tccttacaga	4140
gtttatactt	gaatagtaaa	tatgtcttct	gagttttaca	gtgtcttaaa	ctcaatgcac	4200
atttttttt	cttcttttc	cacccttct	tgtttgtagt	tcattatacc	tgtcctatta	4260
cagaactgat	ttccttcctg	gctgtacatg	ttggggtgct	ggatttttt	ccgtgtcttt	4320
agtcttccat	aaatccacac	acacacacac	acacaaaaaa	tatatata	tataaatata	4380
tatgtaggat	acatgttctc	ttctttagct	tgtggtgaat	acagtaattt	gcattgaaga	4440
at						4442

<210> 183

<211> 4914

<212> DNA

<213> Homo sapiens

<400> 183

aatctaacac	cccagatcac	tttgttgagt	tccccgaagt	gtgcattgac	aactctgatc	60
actcctttcc	ctctgtgcag	ctgttcgcct	tcctactcgt	tcatcctgca	tccacgcatg	120
ctccttatgt	cctatggatc	cctcttggtc	caacttgccc	atccacctat	acactctctc	180
ttcgactcac	agcagctctc	tgttttctca	tgttgttctt	cctggttttc	ttctcttttc	240
ttggttctat	ttttctcttc	tttcttctcc	aatttcttct	cagtccttga	ttgcctcagt	300
ttgatgttct	gttctttttt	ccttttcttt	cttgagacag	ggtctcactc	tgtcactcag	360

420 gatggagtgc agtggcatga tgtcggctca ctgcaatctc tacctccaaa agctcaagcg 480 atcctcccat cccagcctcc caagtaacag ggattacagg cacatgtcgc tgtgcctgga 540 taatgtttaa tttttaaatt tttttgtaga gacaaactct ccccatgttg cccaggttgt 600 tetegaacte etgggeteaa ataateetee tgeettggte teeegaagtg ttaggattae 660 aggcatgage caccatgeet ggccagtttg etgetettaa gtgtecattt tetatgtett 720 ctcagttcat ttctccctct tcacttgtct cttgttttct tccattttat tgttcatata 780 tttatctctc ctattacctc cttttttctt tttcccacct tttttgcctt gctgtatcta 840 ttcttcctcc taaacaccct gtacccccat cttattagtt tttaatccta actcttccaa 900 agatcagtac ttttccctct gcctataaag aaaaccattc aagtgaaggt gtaaaatccc 960 cagctttagg aatgttttcc aaacatcagg aggcaggcag catggtaaat gagaaagagg 1020 ccaggactgg gagtccaaag tcctggcttc tatgtctggc tttgctacta atcaaatatg 1080 tgactttttg caaaccatac ctcactaaac cttactttct tcatttgagc gtgttggacc agctgtcccc aggaaccccc ttggattgat ctgagaaggc aaggataagt ttttcaaagg 1140 1200 aagaaaagag gagtagtcag tccgcagtac agtagacaca agccccagga catctgagtg 1260 tettteagea agaactetet gtgatattte actacaattt etetggeace ttgggactet 1320 cctcagccct tgtggtggtg ggtcttgttt aactagcagt tccctccatt ctatgcctgt 1380 gaagaatcta tcacctacca tgtgattaca gtgcagattt ttttttcctt ttccttttct 1440 ttttctttct ttttttttt tttttgtttg agacggagtc tcgctttgtc acccaggctg cagegeagtg gegegatete ggeteactge aageteegee teeegggtte acegecatte 1500 1560 tectgeetea geeteegag tagetgggae tataggegee egeeaeegtg eetggetaat 1620 tttttctatt tttagtagag acagggtttc accgtgttag ccaggatggt ctccatctcc 1680 tgacgtggtg atccgcccgc ctcgggctcc caaagtgctg ggattacggg cgtgagccac 1740 tgcgcccggc ctacagtgcg gatattttat gagagaggag atcacaactc agtccccaag 1800 ccctcaaccc ttaatacata ctatcgtatg aaatgcctct ttccaaattc agccttttct 1860 aaaactcaag atgagaaaac tgctgatgag gctcactttc taaaataccg gaatttgcaa 1920 tatagggaga atagtttttc atgtttcttt gtttgagcaa tagagagaaa ggaaacttat 1980 gtcgtttact tttcaggcca tagaggtttt cagaacaact tgaaaacatg atcaaattgg 2040 ccaaacttct gatagttttc aatgtagtct gtgatcatgg gataatttag cctcagttct 2100 ttttctgaaa ttgtgttttg aatgtttgat ttgacttatt taccatcaaa cttgctataa

2160 ggttattact ctaatgaata agcatattcc cttaattggg agcaatttac tattatttct 2220 ttcataaagt agggcaccat tcaccatcta tttcctggct ctttagttat caaaatgtta 2280 agctcattgc tattcatccc ggcacagcac ttatatgaga ggcatgaagc tggctgaatt 2340 ctgcatcatt aggaatgaca cagcctcatc acattgacac cagtgtttgt ctctcacacc 2400 aatccaaatt aagaccaact gaaaatagtc agagtttcct ctggagctcc tttttgaaga 2460 gacatatgtt ttttagtctg gtggtaccca aaattgaaca aaaaatgggt gctgcttctc 2520 ttaataggca aaactatgct gcaggataat gtattcatgc agggtcttcc agccagaccc 2580 caaatcatcc ctcccttcac tagaattttt ctgtttaatt cgatggccac tctccacagg 2640 gatccattct gtgtcttatt acaggagatg ctcaatgaat gagggactta tcttctagaa 2700 atgcagetee gaggtagtet gttgagtgaa ataatgaate cattgteaca gaataaattg 2760 aaagctgtct gacatttgga caatttttat tttgtttcac attgttctga aaactatact 2820 gtttcttttc tccctattat ttaaataagc aaatgatgaa cagattacaa aattgaggac 2880 actcgaggta agggaaggag cccctcgaca ggaggatcag gacatagtac caagggcaag 2940 agaaacgatt caataaacac tatttactat atattttagg catggttcta ggtaatcaca 3000 tgataagtag ttgaaagaac tgaaaatgtt ttatctgcaa gaaaagggca agtgtaatat 3060 cttcaaattt tagaaagaat gtaaattaga atttgactta atttggtgta gttcttgtgg 3120 gcagaaattg aattgaatag gctgaaagtt ataagaagga ttttagctca gtattgatac tggactgctc atgggtggtg agagttactc atcactggaa gagttcaagc aggggccata 3180 agaaatctca gggattttat aaggtgattc atgctctggg aaaaggatgc cttggattat 3240 3300 tgtgtcaggg taacttctaa ctctaggatt ctgtgtttct aagatctgga ctctagtctt 3360 gccactcacc tgccatcaag aacatgttcc tcatctgcag gacaggacca agatggctct 3420 gtctacctta ccgggttgct gtgaggcgtg attgtgataa aatacataaa ggcagttttt 3480 aagctctgaa gcactagtta aatgtgtagc gtattttaag attctgttgt atgtacaatt 3540 gtttagcagt ctctctctct ttctttctct ttcttttatc agagatagat gattttccct 3600 cttatttcca ccagtttggc ttttcaggga aggtggcagc tggcagaatc ccctgacaac 3660 aaaaggtaca gcaaaaagtg gaggcctaaa gaaaacatgt gctagctctt tagcccctga 3720 atagctaagt cacatgtcag cctgctctcc ttcatctgtt tgggaggagg cagattagag 3780 tcacactgtc atcatgctct tcccctcaga agcagctgta aggtttttgg tagctgtcag 3840 tgctagcaaa cagtgctttt ctcacagaac tactggaaag agtcctggct cggaaaactt

gctcttgaaa	gtggcacggc	cagagcaggg	gtctctagag	ggtcgtgcca	cctctacctg	3900
ccacaggttc	cattgtcggt	caggtaagtt	agaggcagca	gttccccacc	tgccctctgg	3960
ataacagcag	cctggggctg	ctcctgagtc	atgtttccac	ttctgtctta	caggcctcat	4020
tttcctaccc	atctttctgt	aaaaatgaaa	gtcaggagtc	ttatgaaact	taccattatt	4080
caatacaggc	ttttggtttt	tttctttaaa	ttagataggg	ttaggtaaga	agtagagttc	4140
tatagaacgt	tcataggaag	caacaaaagt	tgatctcttg	gtctctacaa	taggagagga	4200
ttgggctaga	taccttcaaa	gctgacttgc	cctaatattc	tagtatgaaa	tgattcgaag	4260
gtacacctgc	ccctatcatg	tcaggcagtg	agtacagtta	aaacattggg	aattggtaaa	4320
ggaaagaaaa	aaactgaaaa	gaaccctttg	aagttagaca	aactgtccag	agacatagtg	4380
ctaaaatcct	ccctcttttt	ctttccacag	cttctagaat	tcctctccag	agctactctc	4440
aagttatatc	caggggacag	gcccctttgg	ctccaaccca	cacgcctgaa	ctttaaggat	4500
cattggacta	tcttctctgt	ggccagcgca	gctctcttct	gtgttcacag	aatggccact	4560
gataggcatg	cctcttttcc	cacccactgg	aaggctcaca	ggcaaggtga	gagaggacac	4620
agaaggtgcc	aacactgtcg	ctacagtaag	gacctgaagt	gactttgaga	aattcaccct	4680
cacaaacctt	ccttcaggag	caggcattgg	tagtgcagag	gcacagattc	cgtcctttac	4740
cagctgcaga	atcttgggca	agttacatag	cctctgtgag	cctcatcggt	aaacagtggg	4800
ggttatgaaa	cccacctcac	agggttgttg	tgaggatcca	atgagttgat	ttaggtaagc	4860
acctagcaca	tgccgtggca	ccaagtaagc	actcaataaa	tcactcaact	cctt	4914

<210> 184

<211> 4230

<212> DNA

<213> Homo sapiens

<400> 184

aaattatgga tcaatacaaa ttttatgacc catctcctcc tagaaggaga ggcaactgga 60 ttactctaaa aatgagaaaa ttgataaagt ctaagaaaga tattaatcgg gaacgccaga 120 aatctctaac attaacaccc acccgctcag actccagtga aggatttctt cagctccctc 180

240 atcaagacag tcaagatagt tcttcagtag gttcaaactc tttagaagat ggccagacct 300 tggggaccaa gaaaagcagc aatactacat cctttgaaga cataagtcca caaggtgtta 360 gtgatgattc tagtacggga tcaagagttc atgcaggtgc agttaataac caaagcaggc 420 cacaaagcca cagcagtgga gaatttagcc tgcttcatga ccatgaggct tggtccagca 480 gtggtagcag tccaatccag tacttgaaaa gacagaccag atcaagccca gtgctccagc 540 acaaaatatc tgaaacactg gagagtcgac atcacaagat caaaactggt tcccctggaa 600 gtgaagttgt tactctacaa cagtttttgg aagaaagcaa taagcttacc tcagtacaga 660 taaagtcctc aagtcaagag aatcttttag atgaagtaat gaaaagtttg tctgtctctt 720 ctgacttttt gggaaaagac aaaccagtta gctgtggtct ggccaggtca gtaagtggaa 780 aaaccccagg ggacttctat gatagacgga caactaagcc tgagtttttg agacctggtc 840 ctcgaaaaac tgaagatacc tacttcatta gttctgcggg aaaacctaca ccaggcactc 900 aaggaaaaat aaaattagta aaagaatctt ctctgtcacg acaatcaaaa gatagtaacc 960 cttatgcaac tttacctcgt gcaagcagcg tgatctcaac tgccgaagga actacacgaa 1020 ggacaagcat ccatgatttt ttgaccaagg acagtagact gcctatatca gttgattcac 1080 caccagetge tgetgacage aacaccactg cagcatetaa tgtggacaaa gtacaagaaa gcagaaattc aaaaagcagg tctagggagc aacaaagctc ctaattctat tacccactac 1140 1200 atgacatgtg ggccaagtga gagaaaagtg tccttcagtt tctcagtatg aagcctttat ttctgaagta acaagacacc tagcaactat aggaatcatt tttaaaaaatc tttaaggaga 1260 cttttaacag tccttcgtga atagagcagg caagaaatac aaaccttcat tccttgaatc 1320 1380 aaggagcact actggattca actgccaaaa ttttttaaag gttttaggac ttactatacc ttgtactgtt aagatctact gaataaagga cgttctctca ctaaggacca ggtgttttaa 1440 1500 ggttaagtgt ttaaagaagt actccaagaa caatctgctt ttttcatcat ttgttttatg 1560 aatttatcca tgtttgctta atgcttctgc taagtgttag ccaaaatcta gccatttata 1620 tttagttgtg taaacctaaa ttaaatgctg tagtattttg tggaatgtac tatatagcaa 1680 gatacagaga aaattgtttt ggcatgtcag agccttattt ggttagcaga ctgcatgtgt tgatactttt tttttcttaa agccaattat tttgatgcaa aagaaattca gtttataaga 1740 1800 taaatctgaa aaatccataa tgaaatagga gttataaaaa atttatagcg atattaatct 1860 ttccatattt cccattaagc aacactaagc attcataagt taacccatgg taaagagtgt 1920 ttttctgaaa cttttttta gtaagatggt ttttcagcaa atggcattcc caagataaag

1980 ctgttgtgct ttaactcatt tcttttcttt ggtattgggt tatgtatgcg tgtgcatttt 2040 tttaacttga gagctgactg ttgcttaaga agttttctta tggcaaaaat aatgtaaata agttactatg atctgcattt tgccagaaac tcatttataa ttaaggctat catttattaa 2100 2160 tgattttttt ctcctttatg atattacatt aaagttgata actgttattg gtacttttga 2220 aatatttgta tgcatttgtt acctttaaac atttggaaga agcacaaaaa aatagattta 2280 gttaacccag ggaaacatca attttttag tagttccaat tttatatcac agttttattt 2340 tcttatgaaa tcaaaaaatg cattgatact cattaatgca aattcattat ttaacatcaa 2400 tatcagagta atcttcaagg tctgaaatga gaaacatact gactttttaa aattttaaca 2460 gtgtacttct taggctttca ttaccagctc tgaagaactt tttggaataa ttccatattc 2520 catagtgtgt ggtttatgag ttgtgggttt catcactaac ccagtaacca taagaaaagt 2580 ctctctctct ctctctctct ctttctctct ccctctttct ctctctcttt cgtaggccag 2640 tagcaatgtt gtgttcacag tctaatttcc aaaagaccat caataaaaaa gagagcatgt 2700 ttaaattgaa atggaactta gagaacttga gcttacttac gtacttcaat gccaccggta 2760 acttaggttt taccaccaaa tgctgttaac attaaatcat tttgaaaatc ttggatgaaa 2820 ggtgctatgt aaatggaaat acaaaggatt cttactaaca ttcaaaaata atgcacaaca 2880 gaaatateta aaacetttte egtagaettt gaaacatete tetetgteat aaeteeetgg attcaagtag cacattggta ataggtatca gagcagtcta gagacaattg catgtcaaaa 2940 3000 aatgtacatt catttttagg tggataaaag taaacataga aattatgtta tggctaaata 3060 cagttagtgg gtaacttaga tttatattag ctagcatcta atttgcacaa ctagaacaca tcccagaaca attactgaaa agctgaaatt taatgggtgg tgatgtagcc caatgagggc 3120 3180 gaatgacatt ccagcttgac ctctccagaa cactaatatc ctaaaataca gaacatgctg 3240 ggttaagtgc attagtgctt caagcagaaa atgctgaaaa caacgtgtaa agtactgaat 3300 ctgagtaggc tgaccctgag aagggacaat taaagagaca accaagggaa cacattgaga 3360 ctacaaaaat atgaataatc tcaattatat tcatcacact tttttcatac catttcaaga 3420 aacaactaga cagtagtaac cacatgaata ttttactttc tccagtatac cttgagaagc aaactttgta ggaagccact cttctcccct aaacaacttc tgccaaacaa taataaagcc 3480 3540 aactggaaac gaatcggagc cattttcatt ttcctaaccg gggcctgaca tgctttaaat 3600 tatctggctg tattctaaat caacacctaa cccctcaagg aaactgaaga atcaatatac 3660 agggtaatag ctttggctca gagctccaat aatgtgcttc agatctgtcc atgtggaaat

3720 gctttcatcc aaatttttaa attggtggtt accaaagagt tcacaaaaca ggtttgtatg 3780 tagcaccttt catgcaaggc atgcaaaaag cctattttaa aatcactgtg catattatag 3840 agttgtagcc acctcacaat gaagtactac agcctgtgct gtcttaatgg tttatgtcag 3900 gaaatgaaaa agatactgta ccaaatctgg aattacaatg gggagtaata atgtatacta 3960 4020 agctacactt agtcctgaga tgtatttttt ctttaagtct tgaatgaata caaaaggagc 4080 ccattttata atataaacct tgatgtacat gttgagatat ttggacaatg aaaatgcctt aaaaggaatg catatggata aagttgcact tataacaccc ttcaacaaaa tctaatttta 4140 4200 aattgtcttt ttcttttcta ttaagggttt tctttttcag tgtctaccat tgtacttata 4230 actgttatta aataccaaat caaataatat

<210> 185

<211> 4035

<212> DNA

<213> Homo sapiens

<400> 185

60 ttttatattg actttggaaa atacagagca atggcaagca aaaaatgttt taagatcatg 120 caaaatttct tccatcaagt aactagtgta atgattgaca catcttccaa tctgtgtgtg 180 tatgtcatct gtcattgtca ttttggtcct tggaagttga gtttatctta ctcctcaggt 240 catgacatac taccaccttt atttactttt tattttatt tatttgagat ggagtctcac 300 tgtgtcaccc aggctggagt gcaatggcac aatctcagct cattgcaacc tctgcctccc 360 aggttcaagc aattettetg ceteageete eeaagtageg gagactaeag gegtaegeea 420 ccacgcctgg ctaatttttg tatttttagt agagacaggg ttttgccatg ttggccaggc 480 tggtctcaaa ctcctgacct caagtgatcc gcccaccttg gccccccaaa gtgctaggat 540 tacaggcgtg agccaccgtg cctggcctag ttttttaaa tttatttta gagacagggt 600 ctcgctatgt tgcccaggct ggtctcaaat tcctgggcac aagtgatgct cccacctcgg 660 cctcccacag tgctgggatt ataagcgtaa gccaccacac tcagccacgg tatgctacca

720 780 840 taagggcaac agccaagctc tccctaaata aaggttaatt ttttttttt ttgtatttt 900 tggtagagac agagttttac catgttggcc aagctggtct caaactcctg acctcaagtg 960 atcctcctgc ctcggcctcc caaaatatga ggattacagg catgagccac cacgcccgac 1020 caaaatctga aactttttga tcaccacact ttaccacaag tgtaaaattc cacacacaag 1080 tactcaatgg caactgtttt atgcacaaat ttgtttaaaa tattgtataa aattaccttc 1140 aggctgtatg tatgaggtat atatgaaaca taaatgaatt ttgtgtttaa atgtgagtcc 1200 catccacaag gtatctcatt atatacatgc aaatatccca aagtctgaaa aaatccaaaa 1260 teggaaatae ttetggtete aageatttea gataagggat aeteagtetg cattgettta 1320 taaactgaat gaaaatgtaa gctctattag tcccgcccat ccaccagaga ttccccaccc 1380 ataacctact ggccacaggg aaaaaagcat atgcaccatg atatttttat acacgttgtg 1440 ttaactactg taaacacatt gtcttcttta tatttctttg caggaagttc agaaaaaagt 1500 gtcacgtttt aatctgcaga tggacataag tggattaatt cctggtctag tgtctacatt 1560 catacttttg tctattagtg atcactacgg acgaaaattc cctatgattt tgtcttccgt 1620 1680 gcttttgatt gcatctacct tcattggtgc attttgtggc aattatacca cattttgggg agcttgcttt gcctatatag ttgatcagtg taaagaacac aaacaaaaaa caattcgaat 1740 agctatcatt gactttctac ttggacttgt tactggacta acaggactgt catctggcta 1800 1860 ttttattaga gagctaggtt ttgagtggtc gtttctaatt attgctgtgt ctcttgctgt 1920 taatttgatc tatattttat tctttctcgg agatccagtg aaagagtgtt catctcagaa 1980 tgttactatg tcatgtagtg aaggcttcaa aaacctattt taccgaactt acatgctttt 2040 taagaatgct tctggtaaga gacgattttt gctctgtttg ttacttttta cagtaatcac 2100 ttattttttt gtggtaattg gcattgcccc aatttttatc ctttatgaat tggattcacc 2160 actetgetgg aatgaagttt ttataggtta tggateaget ttgggtagtg cetettttt 2220 gactagtttc ctaggaatat ggcttttttc ttattgtatg gaagatattc atatggcctt 2280 cattgggatt tttaccacga tgacaggaat ggctatgacc gcgtttgcca gtacaacact 2340 gatgatgttt tttagccagg gtgccgttcc ttttcactat tgtgccattc tctgttctac ggtccatgtt gtcaaaagtg gttcgttcga ctgaacaagg taccctgttt gcttgtattg 2400

2460 ctttcttaga aacacttgga ggagtcactg cagtttctac ttttaatgga atttactcag 2520 ccactgttgc ttggtaccct ggcttcactt tcctgctgtc tgctggtctg ttactacttc 2580 cagccatcag tctatgtgtt gtcaagtgta ccagctggaa tgagggaagc tatgaacttc 2640 ttatacaaga agaatccagt gaagatgctt cagacaggtg actgtgattt aaacaaacaa 2700 aaaaaatcta tgaatgcaca tatcatatac catgacttct gaagactata aatgaattcc 2760 acaatcagtg cttcactgag aaccaatttt acctatcttt tcttctaaac tgaacagtca 2820 gagagacage teetggettt agettettgt ggtaccaege aetttgagea etttgtgegt 2880 atcatgcaat atacttgcaa tacacagaac aaatttcaaa tacgcctcac ttttagactt 2940 agaagagaaa cattaaaact taagggtgta aggagggatc aagaaacttg ataaggtcaa 3000 aagcaataat ctctctgaca tattccaggc tcttacactg agaccaaaga gaaatcttta 3060 cctcagtttc ttcatcagca gaatgggttt ctggcctctc tcagggataa ttttgaaggc 3120 ataatgaaaa ttatgatgaa tcactcattg gtaggaaaat aatgatataa gtttcaaata 3180 tgtataattt tacctatact tggtaatgct ttgttttata gagcctgtta agctgctatt 3240 gatagtegga gettatatae tgtgaettet gaagaetata catgaattee acaateagtg 3300 ctttgttgat acaaaatcct taaaagggag gcactttaaa gaatatgtat ttttcacttt 3360 tettaatatg ttteateggt gacaggeatg ataatattte tatatgtaat gggtaattgg gaaaaaatag atgataaata aaattgctct aaagaagtta aaaaactgaa tgaacagcta 3420 atactggtat aaagtaacta atgtttggag ccaacatttg ttccttgtgt cagcaaaagg 3480 atattcacat tccatgatcc ctggctgaga attctgcctc tagtctttct tacccagctg 3540 3600 ttgtctatcc ttgttcaatt ataaatactg ctaagggcat ttttaaaaata cgatcttgta ctccttaaat ttgaatccgt cggcacggtc actcatagga aaatgatcaa acaagcaagc 3660 3720 cagtcatgat ttgactcctt cccatctcat ttcttactgc cttacgctca tcctgaggtc caccttggtc tctaaaaaca ccatgtgttc tcatgcctcc atgtcttttc acacactgtt 3780 3840 ccatttgctc ttcctcccac attacattga aactttcaag cctcagtcga aacattgctt 3900 cttctggata gcagccttct tgacatccct cctcactccc cagtccctac agggcttcca 3960 tagetettta tgtgeaette gateceagea tttteeateg aettgtaatt gtttetgeta 4020 cctgacaatc atcgccttga gtactgggac aacctttgat tactcattat atcctcaata 4035 aatatttgtt gaact

<210> 186

<211> 5003

<212> DNA

<213> Homo sapiens

<400> 186

60 ttagggtgta cctgtgcagg tttgttacat gggtatattg tatgatgctg aggtttacgg 120 tactattata cccacttccc aggtagtgag catggtaccc agtagttttt caacactttc 180 cccctccca gtgtctattg ctgccatctt tatgtccatg agtatccaat gtttactcct 240 atttaccagt gagaacatgc agtatttggt tttcttttgc tacattaatt ctcttaggat 300 aatggcctcc agttctatcc atgttgctgc aaaggacatg attttattct tttttatagc 360 tgtgtggtat tccatgatgt atgtatacca cagtttcatt atccggtcca ctgttgatag 420 gcatctaggc tgatttcatg tctttgctat tgtgaatagt gttgcaatga atatatgaat 480 gcatgtgtct tttcagtgga attatttatt ttctttttga tatataccca gtaatgagac 540 tgtgtcaaaa gtagttctgg gtcaaaaagt agttctaagt tctttgaaaa acatccagac 600 tgcttttcac aatggctgaa ctaatttgca ttcccaccaa cagtgtgtaa gcattccctt 660 ttctctgcag ccttcccgac atcatattt ttttcttttt catgatagtc gttctgactg 720 gtgtaagatg gtatctcatg gttcttattt gcatttatct gatgattagt gatattgagc 780 attttttcat atgtttttt ggccacactt attttgaaaa gtgtttgctc atgtcctttg 840 cccacttttt aatggggttg ttttttgcct gttaatttaa gttccttata aattctggat 900 ataaggccgg tcatggtggc tcatgcctat aattccagca ctttgggagg ctggggtggg 960 cagatcacct gaggtcagga gttcgagacc ggcctgacca acatagtgga atgcagtctc 1020 caataaaaaa taaaaaataa gggccaggca tggtggctca agcctgtaat cccagcactt tgggaggccg aggcctgtgg atcacaaggt caggagttag agaccagcct gaccaacatg 1080 1140 gtgaaaccct gtctctacta aatatacaaa aactagcctg gcatggtggc aggcgcctgt 1200 aatcccagct acttgagaga ctgaggcagg ggaatcactt gaaactgaaa gtgggaggtt 1260 gcagtgagct gagattgcat cactgcaccc cagcctaggg gaaagagcaa aactccgtct caaaagaaaa aaaaaatctg gatattagac ctttatcaga tgcatagttc gtgaatattt 1320

1380 tcattttctc cacatcctca acaacactta ttatcctttg tcttttttta tagtagccat 1440 tttaaaagga gtgaagttgt atctgatagt agttttaatt tccattttct caatgattac 1500 tgatatagaa ttttttttat atacctcttg gcctctgtat gtcttctttt gagaaatgtc 1560 tgttcagatc atttcacatt ttaaatcagc ctattgtttt ctggttatgg agtatttgag 1620 ttccttatat agtaaccctt tatcagatgt agagtttgca aatattttct cccattcggt 1680 aggttctttt aactctgatg tttgttcttt gttatacaga aggcttttaa tttgaagtaa 1740 tcatatttgt ctatttttgc tttgattgcc cttgcttttg gggtcacatc caaaaaataa 1800 ttgcccagac caatgtcatg gactgttccc cgtgttttct tctagtagtt ttttcaggtc 1860 ctatatttac tctttaactc attttcagtt gattttagtg tatggtatga aataagtttc 1920 taatttcaat cttctgcatg tggacctcca gttttcccaa catcatttgt tgaagagact 1980 gttgtctccc cattgagtgt tcttggcatc tttttcaaaa atcagttggc tgagaatgca 2040 tgaatttatt tttgggttct ctgttctgtt ctgtttatgt ctctggtttt atgccagtac 2100 catgctgttt tggttactac agctttgtag tatgttttga agtcaggtag tatcatgctt 2160 ccagctgcat tcttttagct ccagatttca ttggttattt gaagtctcct ttgattccat 2220 atgaatttta ggattatttt ttctacttct gtgaagaata gctcatattt taataggaac tttattgaat ctgtagatca tttttggtag tatggtcatt ttaacggtat taatttttc 2280 aaactgtgaa catgggatat cttttcattt ttgtgatctc ttcaatttct ttcattaatg 2340 2400 ttttacagtt tgccttgtag agatctttta tctcctcatt taaatttatt actatgtatt ttatttattt tgtagetatt gaaataggat tgetttttta tttetttte aagtagttea 2460 2520 ttgttggcat atggaaatgc tgctgatttt tgtctgctaa ttttgcatcc tacaacttta 2580 ctgaatttat cagttctaag agtttttttg taaattcttt aggtttttct atttataaga 2640 tcatgtcatc tgcaaacaca taaaatttga tttccttctt tccaatttgg atgtctttta 2700 attatttctc ttacctaatt gttctgccta gaacatcatc caatactggg ttgaattaaa 2760 gtggtgagag tgggcatcct tgtcttgttc tagtttctag aggaaaatac ttcagctttt 2820 ccctattcag cataatgcta cctgtgggtt tgttatatgt agtctttatt gcattcatgt 2880 atgcttcttt catatctagt ttgttgaaga tttttatcat gaaaggatat taaattttat 2940 caaatgcttt ttctgtgtct attgagactg tcattttctt tttgtccatc attttgtaag 3000 tgttatgtat catgttgatt ggtttgcata tgtcaaacca tccctgcaat aaatcccaat 3060 tgattatggt gaatgatatt tttaatgtat tgttgaattc tgtttgctag tatttatttt

3120 gaggaatttt gcatctctgt tcatcagaaa tactggccta tggttttctt tttttgttgt 3180 gcccttttca tgttttggta tgagggtaac gtcatcatag aatgagtata aaagaatttc 3240 ttccacttca attttctgga aaagtttgag aagaattggt attagttctt tcttaaatat 3300 ctggcataat tcagcaataa agccatcagg tccttggctt ttctttgatg ggacactttt 3360 tattagtgat tcaatcttgt agctcgtaat tggtctgtcc agattttcta ctacttcttg 3420 gttcaatctt ggtggttgta tgtgtccaga aatttttcca tttccattag gctttccaat 3480 ttattggcat atagttgctc ataatagtct ttaatgacct cttctatttc tatggtatca 3540 attgtaatgt ccctgttcat ttgcgggaat gctcttatat gtgactttat gcttttctct 3600 tgctgttttt agattccctc tttgtctttg aatttgatag tttgaatata atgagccttg 3660 gaattgaccg ttttgggttg aatctatttg gaaatgtttg accttcatgt acctggatgt 3720 ctatatctct tgcaagactt aagaagtttt tagctattat tttgtttaat aggttttcta 3780 tgcctttgtt catctttttt ccttctggaa tccataggaa gatgaccctc cacctcccaa 3840 actccctttc aatgaggatt aatttcagac cctgtttgac atgctgcaaa gctcaccagg 3900 gcatcatctt taggagaaag gtatcagtct tattacacca attcaggcct cctctcttgg 3960 atgcaaagtt ggtataatgc aaaggatggg ggaacaagaa acacaataaa ttggagagca 4020 aaactaaggc aagaagaagc cacaggcact ttaaaaacaca aagagggctg ggcactgtgg 4080 ctcacacctg taatcccaga cctttgggag gccgaggcgg gcgggtcacg atgtcaggag ttcaagacca gcctgaccaa catagtgaaa ccccgtctct actaaaaata cagaaaattg 4140 gccgggcgtg gtggtgggcg cctgtggtcc cagctgctcg ggaggctgag gcaggagaat 4200 4260 cacttgaacc caggaggcgg aggttgcagt gagcagagat cgcgccactg cgctccagcc 4320 tgggcgacag tgtgagactc tgtctcaaaa cacacacaa gacacacaca cacacacaca 4380 cacacacgga gcattttgac tcagtcctgt ggatagcacc taacttccat cctcacttca tgacctagat aattgtttct aagctccata ttgcccctag agaaagcatg ggaaccaggc 4440 4500 tgtgaatgat ttccctgaat cctgaataac aaaaacattt tcatggcaaa tatgatctcc 4560 tctccatgac catcacttcc ttggaagtct gtaccacgta caaactggaa ccaaaccaag 4620 gtaatgagaa aaggtgaaaa ggggacttgt ccagactttt ctcccttttg gcaagttcaa 4680 aagtcaaacc tgaaggcggg caaatgggca gaacatggga ggatgctaga ttttctcatc 4740 ctgtgaattc atgacaagga gtttttatcc tagctctgag agttccaaat gggaactgga 4800 agttacttca ctctccatct ctcaaggatt gactcaatga gcttatatcc atccataata

ctgagctgtt atcatgtgtg agtttccctt taaacattga aacagaaaga aaatgacagt 4860 aaaagttaca atagcccctc catgaaatca ttaaacaaag tctatgaaca ttaatattcc 4920 cactttgtta gcattttgt tagtattaac atgcatatca tgaagcttcc ctttttatta 4980 taaataaatt gtacatcaag ttc 5003

<210> 187

<211> 3597

<212> DNA

<213> Homo sapiens

<400> 187

cctcaccctg	taggcccagc	agcaccctgg	agcccagcgt	atccacatcc	cactaatatg	60
aggggcatgc	agtctcagtg	tagttgtgga	gccctcctt	ctggcccagg	tgcccccgt	120
ccacctgtgg	cagcacagtg	tgcagggggc	tacagaccac	gaatgggtcc	ctcaggtgtg	180
aacttgccct	cacttgctca	ctgccccct	ggctccccat	gctgacccag	ttgggacaag	240
gccttcctga	aactgggatg	gggtcaactg	cttgggtatc	tctgggaggc	atgttaaacg	300
caggtctgta	agtattcacg	ttgtgttttc	atcaaaacaa	acccagactc	atccatttct	360
tcccatgtcc	acgggtgtct	ctgaggccca	aacctctctc	ttttgggact	attgcagggg	420
cttctcctct	ccattttcct	gtctataccc	actactcact	gctgtcaaga	tggcggccac	480
tgatgcagtg	ctgtttctgc	actctgcgcc	ttcccgtgct	cccacctca	ttcaggagag	540
ggcagccaca	taggtcctgt	ctgatccacc	ctccggccag	gcggccctg	tgggattcct	600
cacacagcat	tccattaccg	gatggcgttc	cccattggtc	tccttcaaat	ctcaatgcct	660
cagcacaaca	gtggccgtcc	tagtggcgtg	ggggccccag	agacttctgt	gatggcaccc	720
acgtcaacac	atgccctggg	gccccagaga	cttctgtgat	ggcacccacg	tcaacacatg	780
ccctggggcc	ctggagactt	ctgtgatggc	acccacatca	acacatgccc	tggggcccca	840
gagacttcag	tgatggcacc	cacgtcaaca	catgccctgg	ggtctctgag	gccaggaaag	900
cacaatagcc	tctcacctgg	gcagtaaatg	ttctggcccc	aaagtgacgc	ctgtcctacc	960
ccagggaccc	ccagctccat	gctccaggag	ggagggcagg	tggatccagg	tgtctgcagg	1020

1080 agtctgcacc acaacccctt ccccagcctt tcagtgatcc tacaggactt cacaggctcc 1140 acagtagcgc atggttctgt gagtctgctc ttgcagtctc tgccctttga ctggagtgtt 1200 gtgtccgtct gtcgaggctt caatgcacca ccccattgtg ctgctctggt gtctttgagt 1260 ttagagetee tggegaggtt aacteggtea geatettete etggteatge eageeceage 1320 ggcccggtgg ctctgaccgt ggagtttgcc atgtgctctg actcaggagc atcagggctg 1380 gtgttctgtg cgttttatgg gttctgattg tgggttcatg ttcctgggga tcctcttgag 1440 ttccaagtac acagtgtgat ctctacacag gatttacggc cattcttca ggggcctcct 1500 ggcattgtca gtcccaggaa ccttaagaaa actttaagcc aggggttttt cagatctcca 1560 cgtcacctca gagctcatgc gcccgtgagc ttgggcttag ttcattgttt tcaaggatgg 1620 tgggcgggga tggcgtccag ggtggtggga gctgggcctg gggtctggtt ctagaagcat 1680 cagggctgga gggccttaga cagttacgag gaagggtcgt ctaccaggcc tcggtgagag 1740 aagtgagccc ccaccttcca gtcactggga gaggactgaa gaagcagcca tcccccaagc 1800 atctccatcc tcaaaccaca cagagctccc gcccaggcac tgagagggcc ctggggttcc 1860 accaggtgag tggcactggt ggggaggcct ggggacccct gctgcagaaa gggccacgac 1920 agattacagt gagcccctga ggacatcttt gaggttgggg cctctgagct caggtctcag 1980 gaggtgtctg ctggtggcct gatgggctgc gagggtcttg gtggtcagtg gccccccat gaacagcagc aatgcaagct gctcccacag aggaggggc agagtgaggg cttctggggc 2040 2100 ctcgtccgga tctcaaggtg ccccttgtct gagcttctga tcgtcctgtg ggcaggcgcc tgcctgccgg gtttgtggat gcatctgaca tgccatttgc tgtgtcttct gaaatcctgt 2160 2220 atgggccagg ggtggcgtct gttgtgggga gatttgtagg tctcaggcct gcctccaca 2280 cacacacaga gcacgtgcct catggccctg acggcagcac caggcgcctt ctgaatgtgt 2340 gtccccaatt agcgcacacc acgggtccct gcactgcacg gggcccagaa caagtgtggg 2400 gacagccagg gacatttgtg agcaacagag atagtcttta ttcaaacgca gagagatcca 2460 taacatggaa acactgacgc ttccgaaacc gccccattta ttcacttctc aagtggcccc 2520 cgcttggatg cgcctcggg agagtgggct cagcacagcc tagagcacca ggtctgaggt 2580 atctgcaacc acgtgggagc caggcccctg gacgatgaag gacaatctcc tggagcagca 2640 ataacttata aggagacata atttagagta gctggagcct tggggatgac tttatcctgc 2700 aggaggagga ggctgagagc agacgggaca cgggggcccc taagaagcaa ggttgggaaa 2760 ggaggagget gtttcccaat gcccgtgccg gccaccagag ggcccttcag tgcggagatg

gtcggcgcgg	cctcaccgcg	gtcaggagca	gcgcgaaacc	ccctgtgccc	tcggccgcct	2820
gcagcatgag	cctgcacagg	agccccgac	accccatggc	tccggggggc	cccaggggct	2880
gcggggctct	ggtcttagac	gcagttatca	gggacgcact	cagcctcttc	ttcgagctcg	2940
gggcaggggc	tcccgttgtt	ggcgggctgg	acccggacgt	agcgagtcct	gctcttggtc	3000
ccgagcctcc	cacagtggcc	tccgcacagt	ccccaggacg	accacaggga	gacctcgcag	3060
tccagcggcg	tttctggaac	tggaccaagc	aaaggggaga	ccgaggtgaa	cgcttgcgtg	3120
aagaggcgct	tcgtacaaac	ggaagccacc	tcccaccaac	gtgtgcattc	atcagaggcc	3180
acgcccaccc	ttcgggggca	cttgcgtttc	tccgcacagt	cgcagagtga	gcggcaagat	3240
gggatggcac	catagcaacc	tcggacacaa	cctagggact	ggagttgcgc	gtttctacgt	3300
aagagccgga	gctgccgctc	aagtccctgt	ggtggtggaa	ctcccacatc	gtggcagagt	3360
aagaggcccc	tgggaacccc	gtgggaaccc	cgggagaggg	cggacacccc	tgctgtagaa	3420
agctgctctg	cccgagcctg	gacccagctg	ctacatttac	ccgaataaca	gacaggggca	3480
cctgattagc	tgtcttgcgg	gacctggacc	ccccacagga	ctcagacctt	ttcagtatcg	3540
ttctcgtttc	cctgtgtccc	atctggttcc	ataattttca	taaatttaaa	aatcatc	3597

<210> 188

<211> 1109

<212> DNA

<213> Homo sapiens

<400> 188

g	gatgcttca	ataccgacaa	gccaaaatgg	ttttgggtac	aagatgccag	atgtccctga	60
t	gcatttcca	gaactctcag	aactaagtgt	gtcacaactc	acagatatga	atgaacaaga	120
g	gaggtatta	ctagaacagt	ttctgacttt	gcctcaacta	aaacaaatta	ttaccgacaa	180
a	gatgactta	gtaaaaagta	ttgaggaact	agcaagaaaa	aatctccttt	tggagcccag	240
C	ttggaagcc	aaaagacaaa	ctgttttaga	taagatgaag	tccactttcg	aaaagaagat	300
g	caaaggcag	catgaactta	gtgagagctg	tagtgcaagt	gcccttcagg	caagattgaa	360
а	gtagctgca	catgaagctg	aggaagaatc	tgataatatt	gcagaagact	tcttggaggg	420

aaagatggaa	atagatgatt	ttctcagtag	cttcatggaa	aagagaacaa	tttgccactg	480
tagaagagcc	aaggaagaga	aacttcagca	ggcgatagca	atgcacagcc	aatttcatgc	540
tccactatag	attttcctgg	aaacatgaac	t gccaagaga	ggaatgggac	acaaaaccaa	600
acactgtttt	atatttatgg	tttgcaaact	ggcatttcat	cagtggctaa	attcacagat	660
atcctatata	gattgtatac	agaactgaga	ctgattttgt	accgattaga	atgattgcta	720
tgatctttga	gaaattttc	tgcactattt	gcactgaaat	gtttatttat	tgttgataaa	780
ttgtatcata	tttaagttcc	actgctgttc	ctcttacctt	gattaaatgc	ctatgcatgt	840
acttttagct	agtttttaat	attttataaa	acttcattta	aatttgtatt	tttaacttga	900
agttccattt	cgttatcaag	gatggtattt	agatttttt	cctcttaacc	ttttttcaaa	960
aactattttc	aactgtgagg	aaacccttat	ttttctttct	ttgtggataa	aactttcaaa	1020
agcaacttaa	gatattcata	gtgttaggaa	acaccaaacc	tgcctatgtg	ccatctcaca	1080
aaagaaactt	ttaataccta	caataaatc				1109

<210> 189

<211> 4135

<212> DNA

<213> Homo sapiens

<400> 189

tttgctctca g	gcacctagta	catgaggcct	gatgggcagg	gtgtggccca	gggccactgg	60
aggtcacagg o	cagtggctgg	agttccccta	atgggagcct	ttctcaagaa	ctgacaccag	120
tccccatgac o	ccagacgctc	tgaatgccct	ctggggtgcc	aggctgctgg	cctcagctcc	180
ccctcaaggg c	ccctggcgc	cccactccca	ggccccgggt	ccctgtgccc	tggcgcactc	240
ccaggtttgc c	ctgcaggtgg	ctgggctacc	tgggcctgct	gctgctggac	gtcatcatct	300
gcctcctggt g	gctggttggc	ctcatccgca	gctccaaggg	catcctggtg	ggggtctgcc	360
tgctgggagt d	cctggccctg	gtcatcagct	ggggcgcgct	gggcttggag	ctggctgtgt	420
ccgtgggctc c	cagcgacttc	tgtgtggacc	ctgacgccta	cgtgaccaaa	atggtggagg	480
agtactcggt g	gctgagtggg	gacatcctgc	agtactacct	ggcctgctcg	ccccgcgccg	540

600 ccaaccctt ccagcagaag ctgtcgggca gccacaaggc actggtggag atgcaggatg 660 tegtggetga gettetgagg accgteceet gggageagee ggeeactaag gaeeecetee 720 teegegteea ggaggtgetg aatggeaegg aggtgaacet geageaecte aeegeeetgg 780 tggactgccg cagcctgcat ctggactacg tgcaagcgct gaccggcttc tgctatgacg 840 gegtggaggg ceteatetae etggeeetet teteettegt caeageeete atgtteaget 900 ccatcgtctg cagcgtcccg cacacctggc agcaaaagag aggccctgat gaggacgggg 960 aggaggaggc cgctccaggg ccgcggcagg cgcacgacag cctctaccgc gtccacatgc 1020 ccagcctgta cagctgtggc agcagctacg gcagtgagac cagcatcccg gccgcggccc 1080 acaccgtcag caacgccccg gtcactgagt acatgagcca gaacgctaat ttccagaacc 1140 cccgctgtga gaacacccca ctcattgggc gcgagtcccc gccgccctca tacacctcca 1200 gcatgagage caaatacete gecaegagee ageetegeee tgaeteeage ggeageeact 1260 agaccgcgcc cggcagccac ccaccccacg tgccaacttc ccctccccgt gccagcactg 1320 ccgcttccac ctgggccacc caccggaccc tcgcacgccg tgccaggcct gccccagacg 1380 cgtctgcagg ccgcttgccc tcctgtcccc tcccgcagg ggcacagtgg agacgcaggg 1440 gctctgggcc cgtaccgcca actcgggtca cacctgaacg ctgctgccag ccgatgcccc 1500 agccctgcac gccacccact atcccggcac gctccctctg cagatggtcg ccgcacctac 1560 aagccctggc cgcacccaac ctgtgttgtt gccgcccggc ccttccctcc acagctctcc 1620 ttcctccgc ccggcacgtc tgtggacccc ttcttagttc acaggcacgg ctggggccgc tctgtgctgg cgcctgctgg ccactgaggg acagggacac gtgccacctg ctcatctctg 1680 1740 ccctgaggtc accccgtggt ccctccacgt gcccatctct ctgcagtgcc ctcctcgcct 1800 gtgcagcccg cccacccaca ggctcacccc tcctgccggc tgccagaggc cccctccagc 1860 agggeetete teegttgeee eagetteaet eteteeetea geaeetgeee tgetggagge 1920 cccagccctc cgtggacagc aggggccacg tggagcccgg gccgctcacc cgccacccag 1980 tgctggccgc cttcttggtg ccaaaccccc ttcccccacc cagagactgg gcagctgtgt 2040 ctggttcgtt ctttgcacta accacatttg tcatctctag ggcaggctgg ggctgcgggc 2100 tgagggggac cgctggcacc cccttccct cccttcttgg ttccatttcc atccatgaca 2160 ggtacagcat cccaggagcc cggcctgagg ggctggaccc gagccggctg tgaacatccc 2220 teagecectg etgteecece ttgggactaa ceactaacet cacececaaa etceaegggt 2280 gcccctagct ggcccagagc cggcagtgtg agcccaagtc cgggctggag ccgaggccgg

2340 ggcagctgtc tgggagtcaa ggctgcagta gcgtttcttc atggggtgct ccagggggtg 2400 ccacagaccg acaggcagcc caagggcctg gacacccctc cccaggcagg tgctgcccca 2460 ggaggactgt cctcgggaat gaacctcccg cgggctttgg actgaggtcc ctgtggcctc 2520 ggtctcctcc ccatgaagtg ggagcgaggc tccccaatgg tgcttttggc tttagtgtac 2580 gatgtttgct gtgcttcccg ccgtggaggg cagagccacc ccacatcagg atcggacgtg 2640 2700 gccaaggcca ggggcagcca gagggcagct ggatggccac gtgcaggggt caaggctggg 2760 ccctgcagtg gggcgggccg ccagccccag cagtttacag acgcatggct cttcctccca 2820 gagcagccgg cagctacctg gaccggaaat gtcctcatcc cctccctggg gccaggctct 2880 gccctggcct tcctctgtga acccctcctt tctttgtgct ggtgtctggg accaaaaagg 2940 gggaatatgg gagggcagag tggggagggg agtccatggg cctggggccc caagccgggg 3000 cgtctgagct ccccaggcat gaccaaacct cagtggaggg gcctctgctt caggccccgc 3060 ctggctgaca ttctgagccc ccctcggagg ccccgccaca gccaacctgc ccagtctttc 3120 ctctgggctt gacccgccag gggagttctc caggcctagg gccaggagag aggccctggc 3180 accetggcgt gggtgcccgc caaacgccct gcgaccgctc agaagcacaa atgctgtcca 3240 tggccgtgag gctgcctgcc aggtgaatgg acatagcgtg agaggcggtg aggccagggc 3300 ttccagcctc gtgctgtctc gggactcctg accgtggtgt gcgtgtgtgc ccgtctgtga 3360 ctttctactc accaaggttg aagaaaggaa acggggaaaa tcaaaagggg ttcaaacccc 3420 acctcagtag gtggagggga gcgcctgcca ttggttgtat ttttgttctg agttttcggt 3480 gccgtgttcc taactactcc atcccatgac ctcgccacac ctactggggc atctggctgg 3540 tgcctgctgc catggccagc ccccactctc accctgcaca gggggtcttg cagcccccag 3600 gcccacagcc tcgttgggag gacagggtgg ccctggggac aagagggagg agcccagggg cttacctcac tgagagtgct ccccagcagg catccactac cccagggcct cccacatgtc 3660 3720 atggcaaggt tggtagtgaa tgggcctggt tgggagcagc ccctggccca ttgcccaccc 3780 acccatctca ctatgcaatt cgagttccaa gcaacatttg ctcctgccct ggggccagct 3840 ctgccccagc cctgagaggg gtggtgaggc agcccctgg accccagaac cccagacaag 3900 ggggcaggcg ggggaccagg gcctctcctg tgggatcttt gttttgtgtt taaccataat 3960 ggttgtgtac tgaggcctga accattttgc atttcccct cctccagcct ctgtagggcc 4020 atggctgtat gtactgtcgc tgtgtttttt tgttttttta gaactgggtt tgggggctga

tttttatttc tttgggggct tttttttctt ggcaaatact aaaaatctcg tcaatgtaat 4080 ttctgtggtt tctattcagc ttgggtttca tgttttaaaa taaattttaa aaagc 4135

<210> 190

<211> 3639

<212> DNA

<213> Homo sapiens

<400> 190

60 atgcagcgct tcctgctgga gatctccaac cccgagaccc tctccaatac agccggcttc 120 gagggetaca tegacetggg eegegagete teeageetge acteaetget etgggaggee 180 gtcagccagc tggagcagag catagtatcc aaactgggac ccctgcctcg gatcctgagg 240 gacgtccaca cagcactgag caccccaggt agcgggcagc tcccagggac caatgacctg 300 gcctcacac cgggctctgg cagcagcagc atctcagctg ggctgcagaa gatggtgatt 360 gagaacgate tttccgggte ctccggggte cageceteae etgcccgcag etcgagttae 420 teggaageca acgagectga tetteagatg gecaacggtg geaagageet etceatggtg 480 gacctccagg acgcccgcac gctggatggg gaggcaggct ccccggcggg ccccgacgtc ctcccacag atgggcaggc cgctgcagct cagctggtgg ccgggtggcc ggcccgggca 540 600 accccagtga acctggcagg gctggccacg gtgcggcggg caggccagac accaaccaca 660 ccaggcacct ccgagggcgc gccaggccgg ccccagctgt tggcaccgct ctccttccag 720 aaccetgtgt accagatgge ggetggeetg eegetgteae eeegtggeet tggegaetea 780 ggctctgagg gccacagctc cctgagctca cacagcaaca gcgaggagtt ggcggctgct 840 gccaagctgg gaagtttcag cactgccgcg gaggagctgg ctcggcggcc cggtgagctg 900 gcacggcgac agatgtcact gactgaaaaa ggcgggcagc ccacggtgcc acggcagaac 960 agtgctggcc cccagaggag gatcgaccag cctccgccc caccccgcc gccacctcct gcccccgcg gccggacgcc ccccaacctg ctgagcaccc tgcagtaccc aagaccctca 1020 agcggaaccc tggcgtcggc ctcacctgat tgggtgggcc ccagtacccg cctgaggcag 1080 1140 cagtcetett cetecaaggg ggacageeca gaactgaage caegggeagt geacaageag

1200 ggcccttcac ctgtgagccc caatgccctg gaccgcacag ccgcttggct cttgaccatg 1260 aacgcgcagt tgttagaaga cgagggcctg ggcccagacc cccccacag ggataggcta 1320 aggagtaagg acgagctcag ccaagcagaa aaggacctgg cggtgctgca ggacaagctg 1380 cgaatctcca ccaagaagct ggaggagtat gagaccctgt tcaagtgcca ggaggagacg 1440 acgcagaagc tggtgctgga gtaccaggca cggctggagg agggcgagga gcggctgcgg 1500 cggcagcagg aggacaagga catccagatg aagggcatca tcagcaggtt gatgtccgtg 1560 gaggaagaac tgaagaagga ccacgcagag atgcaagcgg ctgtggactc caaacagaag 1620 atcattgatg cccaggagaa gcgcattgcc tcgttggatg ccgccaatgc ccgcctcatg 1680 agtgccctga cccagctgaa agagagtatg cattagaaac aaaagcccgc ttgctcgctt 1740 gctggaacac aggggccttt taagttgagc gtgcgcactg catgggaaat agcggccctg 1800 gaggatgita gacttgctcc ctctccaaga cagcagcagc ctgcacctgc cccgtgtgtg 1860 tggccggcct cctcctcacc cttcccggcc cccggccaag gacccaggcg ctgcatacag 1920 gggaggggcg caccccacag ctggggccgg ttttcctcag ctctaggctg ttctgtagct 1980 tatctgcccc tcccccactt tcaagacaga tgagcaggag cttgggtctc tctcggcccc 2040 tgtctgttcc cagccctgc agattctgag caaaggccct gggtaagaag ggtgggagtg gggcctttgc cagcagagcc agggcagggc gagctgcagg aatcacccct ctgccctgc 2100 agctggaatg tgccacagag gccccacctg aagggtggat gtgctggagg ggtggcccag 2160 agccatactg cgtccaccct gagctcgggg acaggtgaca gtggctgctc tgggaagggg 2220 cttttagatg taacctacaa ttcagttagg ctagagacag atgctggtgg aggaagggct 2280 2340 gggccaccag ggatcacaga ccacaggaag atgggaggtg gaagcagagg ccctgcccc 2400 acception general acceptance acce 2460 agggtggcca cacaggcagg gcctggctcc agtctcatcc tcccattgcc cagtgagccc tgctcttctc tccccagccc cctcccaccg ctgcctcgta gagtgacctc ggacagagcc 2520 2580 cccctagcaa tacagggagg ctcccggggc ctggacaggc gggctcggag gctacccgct 2640 gtggccggtg ccagctgccc ttgcagggtg ggtgagctct caggccgaga gccttattta 2700 cctagtgcaa aaactgtaaa agtgtacaga ctcttcacag atttttatct taattgcaag 2760 tctgccgatt ttgtaaatgt tcttggtgtt tgactgtaat gtaactatct cacctaatgg 2820 ttgtacatat cctttggtcc tggtgctgcc gagggctggc cgggactgct gctctcccaa 2880 gggttttatt ttatttctga atctagagaa cagtattggg caggaggaaa aggcttggtg

tctgcggggg	gtgtcttccc	tgcctgtggc	atttgtgtgt	tggctttgca	gctgctgtct	2940
gagtagtggc	cactggggtg	ccttcactgg	gccagtcaac	ggggggctcc	tgcccaggcc	3000
acagagaacc	tgagttcccg	ggagctgggc	cctgcctgca	gccagggctg	gggttgccag	3060
aggccctgga	gggaaggaca	gtccctgctg	gggaagaaca	gccccggggc	cccctggtca	3120
ccgagactca	gcctctgctg	gagaaagcca	cgccctccct	gctagcacag	aggcctgact	3180
gactttttg	cttaacttcc	atgttctggg	tgatggaaac	tgccaaacct	cctgtcagtg	3240
aggactcttt	ccgactgccc	agaaagtggg	ggtggaggac	cgaggctaca	gctccacacg	3300
ccccggtccc	ccagagcatc	tgccccaggt	acacctcccc	ctgcgccccg	cacgactgcg	3360
ggagccagac	tgtccaggga	gacagcctct	ctcttttcta	cacactcagc	cacaaagccc	3420
cccagctccc	acaccgcgtc	ccagctcccc	tcttttgtaa	gtatgtgaaa	aggaaaaaaat	3480
gcaaacgttg	gagtttgggc	tggagctcct	ccctccagct	gcgactttta	actatgtaat	3540
aatgtacaga	ggaagctgtt	ggtgttctaa	gactctgtgt	ggctgtgcaa	tttctgtaca	3600
tttgcaatta	gaaatattaa	agatttattt	agctatttt			3639

<210> 191

<211> 4493

<212> DNA

<213> Homo sapiens

<400> 191

atagtgagct	cactgctgct	ggagccggag	gactgcgcgg	cagccgtggc	ctactgcctg	60
ccgcgcgagg	cgctgtggct	gctgaccagg	gctgggcacc	tggtccgcgc	caacgcggcg	120
cgctgcccca	tgagcgtgct	gcaccgcgtg	tgcccgccgc	cgcccctgc	gccgcagcct	180
tgctgtctgc	acctgtacag	ccacctcacg	gatctcggag	gcgccttctc	ctcctgggag	240
atcgtgcgcc	agcactgggg	cgagttgcgc	tgcagctctg	tggcctgcgc	ctggaagaac	300
aagaaccggt	gggtgcggga	gccggcgagg	gtctggcggg	cggaaggagc	ggcagggtcc	360
gcgccaacag	gctcttccca	ctcgcaggta	cctgccagtg	gtggggcaca	cggacggcac	420
gctgtcggtg	ctggagtggc	tctcgtcgaa	gactgtcttc	caaacggagg	cgcacagccc	480

540 gggcccggtt gtcgccatcg catccacctg gaacagcatt gtgtcttcgg gtcagtagct 600 660 teegetgeee acaggtgggg acetgaeggt gaagatgtgg egegtettee eetatgeega 720 agagagectg agectgetge geacettete etgetgetae eeggeegtgg egetetgtge 780 gctaggcaga cgcgtcaccg cgggctttga ggacccagac agcgctacct acggcctggt 840 gcagtttggc ctgggcgaca gtccgcgatt agaccaccgg ccccaggacg accccacgga 900 ccacatcact ggtgagggg cagcatgggt gaagcccagc caccgcccag ctccggttcc 960 tgaccetgaa eeetgeegee aggeetgtge tgetgeecea egeteaaact gtatgeetge 1020 tccagcctgg actgcaccgt tcgcatctgg actgctgaga accgcctcct gcggtaggct 1080 aggaggtggg gagggetggg gteteetace tetgeteete accagagece aetggetgga 1140 ctgagtggag aaggccttgt ccctgctgag cctcggctgc cctgggtgcc tctccaggct 1200 cctgcagctg aatggtgccc ctcaggccct ggctttctgc agcaacagtg gagacctggt 1260 gctggcgctg ggatcccgcc tctgcctggt gtcccacagg ctctacctgc ctacatccta 1320 cctagttaag gtgtgtggtg aggacagagt gagcaaggtg ggccccccc ttgctcacct 1380 tggggggcag acccaggttc ccccagccag ggatacaggc tccttcccct attcagaaga tgtgccggaa ggccccagac gtggtggacg accetccget gccactgatg agccaggagt 1440 cactgacttc cgcccaactg cagaggctca ccaacctcca tggggcagcc agcctcaggt 1500 cccatgcagg cctgctcagc cctcctggag gccctccttt cccactctgg gtgggggcct 1560 ggcggtgtgg ggccctctgg agttgataca agcctgcctg agccctggca cacccgtttg 1620 1680 gggttggtcc ttgtcccagc ctctgcccca gcccactggc atgccaccca gcatcccacc 1740 tgtgcctgtc cctgtttgca gcgaggcctt gtctctcatc catcgtcgga gggcaacatc 1800 teageacetg gtgeegaagg aggtggggtg ggteeteett ageeegeeet geeeeggete 1860 aggececage egteageeet ggggeaggee tgggateeee atggttgeee gggeageaea 1920 tagcaaggct caaggaagag caggctgatc cctgaaccct gactcaggac ttggacgcca 1980 tagtggcccg ggaccgagac cttcagcagt tgaggctggg gctagtggtc ccagcagccc 2040 agccccacc ctcctggcag cagcgccagg aaggctttga caattacctc cgtctgatct 2100 acggctctgg cctgctgggc atgcagtctg gaagggggtc ccagcagtgg agtgccggga 2160 ccctcagagt ggagagaga acccgggatg tgtgtgctgt accccaagct gcccactgtc 2220 ttgcccgggc tgaggtcagc actgcagccc aaacagtgcc aacagccctg tccccacagg

2280 acctgggage cetgggecag caettetece agteteceg agteacagtg cegateceae 2340 ccacccaccg tagggtgcac agcaaggcat cccagcttct ggcccgctcc tcactgagcc 2400 actacctggg catcagtctg gatctgcagc tgcagttgga gcagctccga gggaggacga 2460 2520 gatgggacaa ggaacctctc tctagcctca ggggcttctt tcctgccacc gtgcagcccc 2580 acaagccagg ggcaagccag gatgccctgt ggttgtggcg ccccaggcca tcccaagccc 2640 agtggcagag gaagctgctc caatggatgg gggagaagcc tggggaggag ggggaggaag 2700 acaagaagga agaggaggag gagaaggaag acgaggagct ggactgggcc ttggcttccc 2760 tgagcccgca ctccaaccag cagctggatt cctgggaact ggaggatcag agtgctgtgg 2820 actggaccca ggagcccgg cggcgcagct gcaaggttgc caggacccac cctcatccct 2880 ggcaccgtca tgggagtttg ctcttggatg agcattacgg gcatctgccc aagtttctgc 2940 atticticat ctaccagacc tggttcaaaa agttgttccc catcttcagc ctgcaggttg 3000 gagggaactg gggatgcatg agaagcatgg gttagggtga gggacagggg agaaggtagg 3060 ggctggcttg ggtgtgacat gggagcaggg cctcagcatg ctaccctgca ggcatacccg 3120 gaggcgggca cgatcgaggg cctggcctcg ctgttggtgg ccctgctgga gaagaccacg tgggtcgacc gtgtgcacat cctgcaggtg ctactgagac tgctgcccaa catgagcagt 3180 gatetecaag gecagetgea gggeetgete gtacaettge teaacetgga ecageceee 3240 3300 agcctccagg tgtgcccctt gtcctgcccc cagttttcct ccccgcccac cggccctcag 3360 caaccacatc cccaccgcct gcctcaggac cagacacaga agaagttcgt gatactggcg 3420 ctgcagctgc tcctggcctg ctcctggag tcccgggatg tggtgctgga gctcatgtcc 3480 tactteetet acteteegt geaetgeegg ceagagetea agaagetget geaegggetg 3540 ggccttcagg acccagaggg cttcctattc aaggagatga tgacctgggt ccagggccca 3600 gacctggact ccaaggccgg cctgcgcact tgctgccacc agaaactgga ggacatgatc 3660 caggagette aggagacece ategeagaeg teagtggtet etggggeaee caeaegegee 3720 teegtgatae eetegggeae eteetggteg geeteeggea tettegggag getetegeag 3780 gtctcagagg tgcctttgat ggtggtctca cctgcggagc cgcactcttt agccccggag 3840 ctccaggccc ageggatgct ggcacccacg cgcagctggg ggacccctca gctccgtctc agagtgctct ccgagacgct gaagagcttc tgcctggagc ccgaggcccg cctgcaccct 3900 3960 geegggeetg eteagetgee eggagageeg eegeegetgg aggagaeega etggtegeae

4020 tegeagetge tggaettggg ecceategae gegeteaact tettetgtga geagetgegg 4080 gcgcagcagc ggagttcgct ccaggagaag gctgcgcacc cacacccgcc agtgccctac 4140 acggtggcgc cggtgcccga catggtggtg ccacctccgc gggagcactg gtaccacccc 4200 atcctccggc tgcaggaggc caagccgcag aggtccgcga ggtccgcgat gagactgagg 4260 ggccccatgc cgtcccggct ctgtgcgggc cgcaccctgg acggccccat ccggacgctg 4320 aagctgccgt tgccgcgtgt ggagccgcag cctttccccc tggactggcc tatgcccccg 4380 cgcccgctgc ccccgcggct cctgcagccg gccctgcagc gctactttct gccagcggac 4440 geggaeeetg acacetacag etgaeegge tggtggeete ageeegeetg getetggge 4493 ctgtcattgg tatttggcca aggcctgcat cgggaataaa gtccagagaa ttt

<210> 192

<211> 3749

<212> DNA

<213> Homo sapiens

<400> 192

tccacgacgc agcagagaac gggcagatgg agtgctgcca gaccctagtc tcccaccacg 60 tggacccctc cctgcgggat gaagatggtt acacggcggc agacctggcg gagtaccatg 120 180 gacaccggga ctgcgcccag tacctgcggg aggtggccca gccggtgccc ctgctgatga 240 egececeace accaeegtte eccecacete caetgttgge caegaggege teeetggagg 300 atggaagaag aggaggccca gggccaggga accccagccc catgtccctc agcccggcct 360 ggcctggcca tcctgaccag cctcttccca gggagcagat gaccagcccg gccctccga 420 ggatcatcac cagtgccacg gctgaccccg aggggacaga gacggcgctg gcgggggaca cctcagatgg cctggccgca ctacagctgg atgggctgcc ctcaggcgac atcgacgggc 480 540 tggtgccac gcgggatgag cgcggccagc ccatcccaga gtggaagcgg caggtgatgg 600 tgcggaagct gcaggcgcgc ctgggcgcag agagctccgc agaggcccag gacaatggtg 660 ggagctcagg ccccacggag caggcggcct ggaggtactc acagactcat caggccatcc 720 tggggccctt tggggagctg ctgacagagg atgacctggt ctacctggag aagcagattg

780 cagacetgca getteggege egetgteagg agtatgagag tgagetggge eggttggegg 840 ctgagetgea ggeeetgetg eeegageeee tggteageat eaeggteaae ageeaettee 900 tgccccgggc gcccggactg gaggttgagg aggcctcagt cccagcggct gagccctcag 960 ggtctgcgga ggcctcagag gtggccccg gggtgcagcc cctgcccttc tggtgcagcc 1020 acateteceg cetggtacge ageetgteee tgetgetgaa gggegtgeat gggetagtae 1080 agggggatga gaagccatcc acccggcccc tgcaggacac ctgcagggag gcctcggcca 1140 gccccctcg gagcgaggcc cagcgccaga tccaggagtg gggggtgtct gtgcggacgc 1200 tgcggggcaa cttcgagtcg gcctctggcc cactctgtgg cttcaaccct ggcccctgcg 1260 agccgggggc ccagcacagg cagtgcctga gtggctgctg gccagccctg cctaagcccc 1320 gcagtggcct ggcttcaggg gagcccaggc ctggcgacac agaggaggcc agcgactctg 1380 gcatcagctg cgaggaggtg ccatcagagg cgggtgccgc agccggccca gacctggcca 1440 gcctgcgcaa ggagcgcatc atcatgctct tcctcagcca ctggaggaga tcggcctaca 1500 cgccggccct caagacagcg gcctgcagga ccctaggagc ccgccacgcg gggttgcggg 1560 gccaggaggc cgccaggagc cctgggccac cctccccgc cagcgagggc ccccggctgg 1620 gccacctgtg gcagcagcgc agcaccatca cccacctgct gggcaactgg aaggccatca 1680 tggctcacgt gcccgcccgg cagctgcggc ggctgagccg gcggccccgc ggggctttgt ccccgagca gttcctgccc cacgtggacg gggctcccgt gccctacagc agcctctcac 1740 1800 tggatctctt catgctgggt tacttccagc tgctggagtg cgacctgccg gcggaggagc ggaagetgeg ceacetgetg tgettegagg tettegagea eetgggeace caeggetggg 1860 1920 aggetgtgcg egeetteeae aaggeegtga eegaegaggt ggeegeegge egeegggeet 1980 ggaccgacgg cttcgaggac atcaaagccc gcttctttgg ctccagccag cgtcccgcct 2040 gggatacgga gcctggccgc aagtcaggcc tgaccctgct cgggcccctg cctcacgccg 2100 ccgtccctg cagcggccct gagcccacag cacagcggct ggggtcccgc tcccagcagg 2160 gcagcttcaa cggtgaggac atctgcggct acatcaaccg cagctttgcc ttctggaagg 2220 agaaggaagc tgagatgttc aactttggag aatgacccta ctggcagcct gctttccaga 2280 2340 tcaggtgagc cgggcaaggc tgcctccagt cctaccagtt atcggaggct gcgggactgt 2400 tctgttgtgg catggttctc ctccgagctg ggactcagac tccttctcac cactgcaccc 2460 aggaagcccc ttggcaggtc ctgaagtgag gcaatgggcc accccagtcc agggcacctc

2520 tgcccagccg gcccccgaga cctgggatgc tgcctgtttc tcacttgtcc ttccccagtg 2580 tcaccagtta ccttggcgtc ctgtccctca gtttctgtgg tgctggtggc ctcggccaca 2640 tccatctttc atgtgagtct gaggtggccc caggccctgg tcctgcccct gtttctcctg 2700 ctgaccttgg gtcacacccc ttcacctccc atctgtgaat ttgggggagc tggagtgatt 2760 ccgaggacag attccatggg caggaggtct tcctgccagg ccatccctgc tggtcacaca 2820 ccgatgcccg ccaggccagt gccccagccc agggtgctcc ggaggccctg cttcctcaaa 2880 ggaggetece catggggee etgteeteca geetgaceag eeetggeeta gtegtgggee ccagcaaggc tggagagcag ggacgtggga gtagcagtgg ctgagagagt cctccaggca 2940 3000 gggtggctgg tgcccactct caaaggctgc tgcacacaga ggagaatgcc ggcaggggtg 3060 ggcagcagcc agacctcagt ggggcgtgga tactccgtga gggcacctgg gtgtcaccca cagtgcacct cttcacaggg gcctgggtac tggagggagg gatacaggaa gggagatgga 3120 3180 ttccgtcctc gggggctctg ggtgctgcgg agtattcctg ggcatggtgc tgggcatggc tggcataggg tgtggcttgt ccccagcttc tgatggcagc caggagaatg ggtcatcacc 3240 caggetetgg ggetgaggag gaetgggete aageeeacag ggaetttgga ggtggggete 3300 3360 tgcagctgtg agatggccca gcagggagtg gcagggacgg gaggcttcag gaatattcct 3420 cctggcatcc aggcccctg ggacagagga gggtgcagtc aggcgacagg cttatcagga 3480 ctccctgcct caatccctgg ggattgtcca ggcaaaacct ggagggcagc gggcaagctg ttggatggaa cagagagacc ctcgcagctg actagggccc aaggggacgg acactcaaga 3540 3600 3660 tagcaccggc cgcagcccca agccagtggc ttttccacaa gggcctatcc tgcagccggc 3720 ccgctccggc ttcctccact gctgaagacc ctgctgtaga gctgaagctg aacatgtgtt 3749 tgctaaataa agattcccat tcctagcgc

<210> 193

<211> 3765

<212> DNA

<213> Homo sapiens

<400> 193

60	ggtcagctgg	tcgccctgca	cacgttttgc	gagtgaggcc	gcactggcga	attgctactg
120	tgcccgtggg	agctgccctc	tgccctggcc	gagcacccct	ctgccttgca	tcttgctcca
180	gtcctcccgt	tcggctcaga	gagaagctga	gggccaaagg	ctgggggatg	cccctggtca
240	ttttctttgc	tgggtcagtc	ctacagataa	agtctgtgtc	ggcagcttca	ctgttggaaa
300	tctcgctctg	tgagacagag	tttgtttttt	aagtttttg	tttttcagag	tctcactacc
360	cacctcctgg	ctgcaagctc	tttcggctca	tggcgcacaa	tggagtgcag	ttgcacaggc
420	gcgtgccacc	gactacaggc	gagtagctgg	tcagcctgcc	ttctcctgcc	gttcgagcaa
480	ggccaggctg	tcaccatgtt	agatggagtt	ttttgggtag	aatttttcta	atgcccagct
540	actaggatta	ctcccaaagt	ctgccttggc	agtgatctgc	cctgacctca	gtcgtgaact
600	ttttctgcgt	caaaggagct	gagaactttt	tggcctttca	ccaccacgcc	caggcgtgag
660	ctgttctaag	cctttctggg	ctgccccttg	tcaactgaga	atccctgctc	ccagtgaagg
720	cagcctctcc	cgcaagtcgc	agccctggcc	tgcgtggctg	aactcagata	cttagtgtga
780	tgtgcttctc	atggcgcgtc	ctttcagaga	cctgctcgga	tcttcctcag	acggctttgt
840	atttcaattc	ccagccgtcc	ccagcttttg	tgtgtggtcc	tctaccagcc	cgtcccaccg
900	ggaagcggcc	agcagcagta	ggctggccct	gaaagggcag	gcggctggtt	cctcacccaa
960	ggatttcagc	ttctgagatg	tgctggagga	tttagccaag	agtgtggaga	agctctcttc
1020	ttgcacagtt	tgacctaggc	aactgaatgg	ttcccctccg	gaccttctgc	gccccagcgt
1080	aaagtgtgtg	ctctagggga	acctctcaaa	ttgaaagttg	agtcagcagc	ttcactaaca
1140	gagaaagtcc	attcccagtt	tgctggttgc	agtttgagcc	gatttgggtc	aggaagtgct
1200	tcagttcccc	aaaccacctg	agacgataga	cgggaaacta	ccggccaccc	atacgatttg
1260	tgttgtgtcc	gagagccctt	aaggagtaca	agatggagcg	aggaagccag	gctgctggag
1320	tgtaggttca	cttgctctca	tcttctggct	ttgacgcctc	tgactgtgtc	ggagcagtga
1380	accccggga	catcatcgac	acagcatcag	cccgtcctgg	gctgcccaac	tgtgtgccca
1440	gtcctggagt	ctttgcagcc	gaggctatga	cggatcagca	agagaagcag	tcctgtctgg
1500	ctggacatct	cgcccacaag	tgctcttcga	cgcatcatcc	gcgtgtggac	ggttcgcgga
1560	atccgcgtgg	tgaggacaag	tgaagaacca	atcaaggctc	ctcggaagtg	ccgatgagtt
1620	ggggccctca	gcgggtgtac	agcagctgat	atcgagacgc	ggcagaccag	tgctgaacaa
1680	atcggctcct	cagggtctac	ccgaggtggt	atcaacaccc	gggcaagatc	tgtggtccct

1740 tctggtccca cccgctcctc atccccgaca accgcaagct ctttgaggcc gaggagcagg 1800 acctetteaa ggacateeag teaetgeece gaaacgeege ceteaggaag eteaatgace 1860 tgatcaagcg ggcacggctg gccaagactg ggttttactc ttcctgaatc atcacaatga 1920 tccgtgcaag gccaaggctg ttgtcttctg tttcaagtgc gttttcctgt cctgtcctct 1980 gtcctgtggc agtggacagc tgtggctctt gccagattgt gtctgctcct aggactgtgg 2040 gagccggtgg tggtagcggc cttgagcttg acccatccct cctgcttccc tgttcctgag 2100 cgagcacctt ggagtatcct tggagtgtcc ttggaggctc tgctctcggg ggcagcctgg gccaagagag cgcctgatgc tcaccccgtc ctcacaggtt cacgcctaca tcatcagctc 2160 2220 cctcaagaaa gagatgccca atgtctttgg taaagagagc aaaaagaaag agctggtgaa 2280 caacctggga gagatctacc agaagattga gcgcgagcac cagatctccc ctggggactt 2340 cccgagcctc cgcaagatgc aggaactcct gcagacccag gacttcagca agttccaggc 2400 gctgaagccc aagctgctgg acacggtgga tgacatgctg gccaacgaca tcgcgcggct 2460 gatggtgatg gtgcggcagg aggagtccct gatgccttcc caggtggtca agggcggcgc 2520 ctttgacggc accatgaacg ggccgttcgg gcacggctac ggcgaggggg ccggcgaggg 2580 catcgacgac gtggagtggg tggtgggcaa ggacaagccc acctacgacg agatcttcta cacgctgtcc cctgtcaacg gcaagatcac gggcgccaac gccaagaagg agatggtgaa 2640 2700 gtccaagctc cccaacaccg tgctagggaa gatctggaag ctggccgacg tggacaagga 2760 cgggctgctg gacgacgagg agttcgcgct ggccaaccac ctcatcaagg tcaagctgga 2820 gggccacgag ctgcccgccg acctgcccc gcacctggtg ccgccctcca agcgcagaca 2880 tgagtgatgg cgcccggccc cgcacctgcc atttgcacgc ccggccggga ggcagagacg 2940 ggggggggg aagcctcacc atttctcaag gtccataaag actgagcgga tgtttcctcg 3000 cctctcgaaa aggaaaacca ccatctttct tttaaggctg ttcctgggcc tggcgggga 3060 ggcaggggtg agaggatgga attgtgtgca caagaactgt ggctatttta atatataacg 3120 ttagaggetg egttetttgt egeegeetee eetgtgtgee ageeetgtgt geaeggeete 3180 tgcccccgg cctttgctgt ggctggagct ggacagtgca gtgactgcga ccgtggggga 3240 gccaggtcgc ccttttggca gctgctaggc tgaggctgca tggacaggaa caccaggcac 3300 cctccgtgtg cttctgagct gaggttgctt cacgggaccg tggcttcctt cctcacctgg 3360 ctctgcctcc cccgtgctct cgggcgaagt gggttcttgt gccttcccct cccgggccca 3420 ggctcccgt gcgcgggccc tgccctttcc tcccgcgccc caccggctcc gacgcgcaac

<210> 194

<211> 3577

<212> DNA

<213> Homo sapiens

<400> 194

60 gctatacaca tctcatatca cttacattgt acttgtgatt cttttctcaa atcccaaatc 120 tctcaaagcc ctttcaaatt tctatctgat taactagtcc aaaggctaag ttggatacag atattttttc tcttcaggct gaagaaatca agactgaaag cgttggttca tgtttactct 180 240 tgtatcataa gtatttttaa aagtatgatt aatatatata ataacaaacc agcacagctc ccctgggagg cacacatatt aaaatgattt acccggagat ttaaatgatt tactccactc 300 360 tcaccaggag aaggtggccc atgccagagc ccacctcaga gcatctcaat ctcaggcctt 420 gcctcatcta tgtgctcttt tatgtgcagg tgcagcccac gttgtggtgt aatgcaaatc 480 tatggctata ctgtatcaca gcgaataaat ccatttggag aaaaaggcac ctggtgaaag 540 gccacagtgc aatggaatgc aatgctgcta tgtgcaatgc tgcttacaag aaaactttgg 600 gtaaatattg cacgggtcaa acttacgatc caactttttc acgtaacagg gccgcgtatt ggatgccttc agaattccca ttcagcgtgt ccactttgct ctttgatgca atgccacctc 660 720 acaaaagcat tcaagccaca gtcatctatt tttttccttc tttctcccct tgctataatg 780 acccaaatct ccgtttttac tttgtaattt ttgtaagttt tttaaggcaa tgactataat 840 aattcatgtt tagtgaaata attcttttgg ttgatatatt tcacagtttg gtctctaaaa 900 aaagttaaaa aacaacaaca agaaccaaaa acaaacaacc cccgcccca agcttccctc

960 tgcttgatgc catagacaag agtccaaagg acattagctg ctccattgca cacattggaa 1020 gggagagttt gctgtgagct cagtccttct aatagactgg caattttgta aaagatttag 1080 agaattttgt ttaaccattt ctgcatgtgt ttttaatgag ctcatgacgg tttctaacaa aggccaggtt gtgtgttttc cagcactttc tgacctgatt cctccctgct gacttgggga 1140 1200 gtgggcacct gtgcttctct cctggctcac ctatgggagt cggggtggtg gggccatctc 1260 cgggcctgtc ttcacgccag ggatgaatca tgtagtaggc agagtggaag gagtctcttt 1320 gttgacagct ttccatctgg actttggata cggctgatcg ctcatgtaga gccgtggtta 1380 gctggaaggg gctacgcgag tcagctcctc cttaagggat caagggtgtg taaaacatca 1440 ggaaagaact gcctgggatt tcatttgcaa agcttagaga agcattttat cctctgagtt 1500 tcaggtagcc agggttgtga atgtgtatga ctgcagcttt gacaggtcgg tctttaatag 1560 tcaataggat catttatagc ctcgttcaga taatccaact ggagtacacc tgaataaata 1620 catcaagctc aggtggctaa aagctaaccc cttttgagtt taataattaa aataaacaga 1680 gctatgaaga tgaatttcag tttgtcatgc ataaatgtaa gaagctccat aaaggatggt 1740 gttctgtgat tcatatagga gtatgatgga tgtatgatac gttttccaca gctatttaag 1800 aaaaaacgat tatcttagtc atggggtaaa gttatgtgaa gcattgcacc atccaggctg 1860 1920 gaaagattac ttcttggcaa actagatatg caaacgccag aatacagtaa aaccacattt 1980 aattggacct acttgccaac ttcttgaaca cagcttggat tattccactg gaggctgctt ctgttaaaag ctgggggagg aggaagtggc atattgacaa gacttcagat aattttttt 2040 2100 tcactcgaag tacaattatg caatgagcca agtttggaag tattttacta tgtttaataa 2160 ttattattaa agatattgta aaacatatgc atttgttaag tggaatgtaa tgggagtaaa 2220 atcatgtcat caattttcct ttggatttat tttcccattt tgtgttttat ttgacagcct 2280 tccaaattga ttctagccaa aaccatgcac tctaatatat atcatacttg atattaaagt 2340 gagaatgcga gtaatttata gaatctgagt gagaacagtt ttcttctctt agccagccta 2400 tatggagctg ccacctctgc tcaggtagca accgacacat gccttgtaca cagaaaggaa 2460 aataataggg gtcgagaaat cctccacaca tccttcctga tagacactcc aaaacccaca 2520 tatcccaggc attgttcagt gggagatcag gggcaaggag aaggataact atttctttat 2580 gtgtgtgtga atctagagga accagacttg tctctggaaa tgcaagtggg aagtgggatt 2640 cactgagaag ccatcattct gctcaggtga gtcctgactt caggcgaggg atcctaaagg

tgacaccgcg	atccttcacc	tggaaagcca	aggagacatg	acatcagtgt	gtttcacatc	2700
ctaagcttaa	acaaatgtat	attgttttta	ccgcctcttt	ctcaaggggg	aacactgccc	2760
ctgaaactgc	actccttgaa	accgagcaaa	ggtgccatcg	ctaatgatta	gcaagacgct	2820
ccggatggtt	tgcatcgaac	tccacctgct	atgtgaaaac	cccatgcttt	tctcactttc	2880
ccattcaagc	tgcttagcag	ttgggtcctc	tcctctgagt	gtggttatgt	gtcagtttga	2940
cttctgtgtg	ccctgcgatt	tcgttgtttt	cttctgccct	gccacagcaa	atgaccagtg	3000
gaggcaaccc	gcggacggag	gaaaagggca	ggtccctgca	tccatctcag	cgccctgcag	3060
ccggcggcct	gtcctttcag	gcgggagttc	ccagcggcgt	tcctaggtgt	tttgaatgtg	3120
tgccccgggg	ctgggggaag	cctcgtgcag	ttctgctgct	gtgggaggca	gggggaactg	3180
gaggggacgg	gagcagtgtg	aggctttcat	gtgcagaggg	gacatgagga	catctggatg	3240
gcatccctgt	gagcagggct	cccgctgcag	gcctttgaaa	accccgctgc	cctggctccc	3300
cagtgccttg	gaactttctc	cctggagaat	gcagaaaagc	cagtgccctt	gatttcttag	3360
acatctacag	cttcgacacg	tgcagggtta	tccaggagca	gtgaggtttg	gggtgagggc	3420
ctgagcactt	tctgaaaagt	gcttgtttct	aagaacctgg	aactatgagt	gaggagtgac	3480
atgagttctg	ccctcaagtc	ctctgataac	cagctgtgca	gtcttgaaca	agtgacttca	3540
tctcttcatc	tttaaaataa	accttttggg	ccaaatg			3577

<210> 195

<211> 3300

<212> DNA

<213> Homo sapiens

<400> 195

aa	atttcagtt	cctgaacgca	cggagctcgc	tccgggaccg	ggctgagaag	gacctcagct	60
Cg	gcgggcccg	ccggagccat	cggtgtggca	ccgagagacg	gtgcttggga	tatgcgacgg	120
ga	agcccccg	ccacagcgca	ggcagtggcc	ccgccgcgcc	gcggagccgg	gcagagcagg	180
ct	ggttcttc	agaggaatca	tccctgactg	tgtcatcact	ctgagctctg	actgcgctcc	240
co	tcccccac	cagtgggacc	agtactcaag	agagctctgg	agtgctcctg	aagagaaat t	300

360 ccatggggac tgtacctgac cctctgagat cagctaaaac ttccctgatt gcagcttccg 420 gaaaagaaga cgatctagga gagccacagg ctgcctcacc tcggcatcga ccagctctcc 480 tgtgtaagaa tgccaatggc ttttcaggtg cccctgcaga accagacctc agccccaggg 540 cagctgccga agccctgatg caggtttgtg agcatgagac cacccaacca gatatgtctt 600 ctcctggtgt gttcaatgaa gtgcagaaag cacctgccac attcaactct cccggcaatc 660 cccagctgcc agggagcagc cagcccgcag catcagcccc gagttctgca gcaggaaggg 720 atcttataca cacaccattg acaatgcccg ccaatcagca cacctgccag tccatcccag 780 gtgatcagcc caatgccatc acctcatcca tgcctgaaga ttccctgatg agatcacaga 840 gaacctcaaa tagagagcaa cctgagaaac caagttgtcc tgtgggaggc gtcctcagta 900 gcagcaaaga tcaggtgtcc tgtgagtttc cttctccaga aacaatccag ggaacagtgc 960 agactccagt gacagcagcc agggtggtca gtcactcatc ctctcctgta ggtggacctg 1020 aaggggaaag gcagggagcc atctgtgact ctgaaatgag gtcctgtaaa cctctaacta 1080 gagaatctgg atgttcagag aacaagcagc cctctgtcac tgcctcgggc ccccaaggca 1140 caacttetgt gacaceteaa ceaaceeece teaetagega acetteggea tgteeeceag 1200 gtccagagaa ggtgccgctg ccagcacagc gtcagatgtc aaggttcaaa gaagccagta cgatgaccaa ccaagctgaa agtgaaatca aggaagttcc cagcagggct tggcaagatg 1260 cggaggtgca ggcagtggcg agtgtcgaga gcagatccgt ctccaccagc cccagtatcc 1320 1380 tcactgcatt tctgaaggaa agccgtgctc ctgagcattt tgaacaagag cagctgcgtg 1440 tcatttgccg cagcagtggg agccacacac tggagctctc tgacagcacg ctagccccc 1500 aggagtccag ccagtgccct ggcatcatgc cacaggtgca cattcaggca gctgcagctg agtctacagc tttccaacgg gaaaataaac ttgcgagcct accaggtggg gtccttaaaa 1560 1620 cctcatcaat caatttggtc tccagtaatg cccagcatac gtgtaaagaa gatgggaggt 1680 tagcaggaat gactccagcg agggaagagt caactgctaa aaagctcgca ggtactaatt 1740 ctagctccct gaaagctacc gccattgacc agatttctat cagtgcatgc agtcaagctg 1800 aaacaagtta tggattgggg aaatttgaaa ccaggccatc tgagtttgca gagaaaacga 1860 caaacggcca caaaacagac ccagattgca aactatctga ctcttgtggc tctatcagca 1920 aagctgatca ttctgggagc ttggatccca ctaataaagg agatgcaagg gaaaagaagc 1980 ctgcatctcc tcaggtagta aaagaaaaag agtctactgg cactgatacc tcggatgcca 2040 aaaccctact gctcaatcct aaatcccaag aaagtggagg cacagaatca gctgctaatc

2100 ctacaccete eccaattagg aagaaccagg agageacett agaagaaaac agacagacca 2160 agacagccac cagcetgage etgecatetg atcccatggg tgactccage ecaggttetg 2220 gcaagaagac cccatctcgc tccgtcaaag ccagcccacg caggcccagc cgcgtcagcg 2280 agttcctcaa ggagcaaaag ttaaatgtga cagcagctgc tgctcaggta ggactcactc 2340 caggagataa gaaaaagcag cttggcgcag actccaagct ccagctgaaa cagtccaagc 2400 gtgtcaggga cgtcgtgtgg gatgagcagg gaatgacctg ggaagtgtat ggtgcatcct 2460 tggacgcaga gtccctggga atcgcgatcc agaaccattt gcaaagacaa atcagggaac atgagaaatt aatcaaaact caaaatagcc agacccggag atccatttcc tcagatactt 2520 2580 cttcaaataa gaagctcaga ggaaggcagc acagtgtttt ccagtccatg ctgcagaact 2640 teegaegeee caactgetge gteegteetg eeegtette tgtgttagat tgaaagggag 2700 tatttatggg agtttgtgta taaatttacg gtattcacat gcgtccctct atgtcaaagc 2760 ttgcttagtt ttttgctgca agactaggaa gaaaaagcga gtattcacta taggaaattg 2820 ctattaaaaa ttgttagatc ctttgacctg gagctctata aacaaaaatg tcatttcaat 2880 ttgaaagaag gaacaagaaa agagaaacaa gcttcactga aggtttgcaa ccttaacaaa ttgaaaataa tactcactgg gtttttaaaa atatgatgtt gttcatagaa atagcattat 2940 tgtatcatta tacatgtatt attttgtata actgcctcaa tttatcacac aatagtagtt 3000 3060 ccattaaaat ccctgcttca tattgaaagt agcaaaaaca ctattggcga aaacattgtt ataatttcta gtcttattgc agtaagaatg ctgtaaccac acaaattata aataggtgat 3120 aagaaccata atgaaaaaaa tgagaacaaa tttgattcat tcctaggcca gataacatta 3180 3240 aataaaaaca gttaaatgtg taaaatatga aatatgaatt aatatttgta aacatctgca gacaactctt tttataaacc ttcttattgc tgttaataaa tataagaaag ttatattagg 3300

<400> 196

<210> 196

<211> 3540

<212> DNA

<213> Homo sapiens

60 ttatcctcgt gatctgcccg ccttggcctc ccaaagtgcc gggattacag gcgtgagcca 120 ccgcacctgg ccgagtgaca cactttgtaa gacaaaagcc atctcatgaa cttctacacc 180 catgaagtgt gtctgggagg cccctcctc tgggcaccac tgccctacga tggctccatc 240 tgtagcctcc ttttccaaga ggacttaaga ccgacaataa atggatccca gatacagatt 300 cccctgcaag cggcaaacgt ccatccccat taccggaaac ctccagatac ttcacactta 360 ctggcagccc aggacacggg gacccaaatc cttgcctgcc ctgagcagtg gctctcgagg 420 ccaggaaggg gggctcgtgc tcagagccag gctggcctgc ctgctcactt ctgtttgcca 480 gggcaccatc atctcccacc aaggatgaac ctgaagcttc agggcaacga agagaaaccc 540 agaagcgaag ggacttgcaa ccaaggctgc ccaaagtggc ccctgtccag gcccatctct 600 aaatacaacc cacaccgagg atgcctggtg gggcagaagt ccctgggtct cgttcccgtc 660 agggggggt gaacetteac aaceteegg ggetttggaa tttgacttaa tgatgaaggg 720 caacatggac cactggacaa agacctggag ttcccactac ctgcaccgct ctggccaatc 780 ccatttggaa atcagtcagc aagattcact ctcctctgga ctctgagccc ccgggaggag 840 aggatgggag aggtcaagcg tgtgcaattc tgttgcagcc tcacaaccaa caagcagccg 900 tgttccgacg gctctgcggg aagcccagag ggactcccgt ggctcaaacg ggggcagaga 960 cgtgcagggc cccggggaac gtgaaggtga gagacagaac ataccgtgaa gaagccactg agagtgggag acagaggcag gaacagggat gacactggag gacagcaggc ctgcctggag 1020 1080 gccagcattc tctacaacct tccacaaacc aacagcaaag cccgctccgg gccacgtgcc 1140 tggcagetge teggecactg eccegeteet ecctaggeaa aateecaggg aageacettg 1200 cgtcgtttcc atttcctcac ctcttactct tccttgaaca gtccccccaa gaaactgcct 1260 acceaceate aacaactgge acagggcaga tecacgggte aggetgtgtg cacetgaceg 1320 cttcataacc cctgcgtggg cagccagcac cctccatcag aaatcgtttg atcccgtggc 1380 ctctgggtct ccatcattcg agctcgggag caacatccca tcaccatctc ctctcctcgg 1440 tgggcccctc ctcgtgttca cccctgcact ggggggaacc caggctccac tcacagagga 1500 gccaacetet gggcageetg ccageteget gtgaaagtee teaeggeeet gaeteeteet 1560 ggagetetge tggeageace taagtgeeca eteagacetg aatggtggea eeageggatg catgaaatgc cagcccagca cccgccccgg tctctcccag ctcagcagca gacaccgctg 1620 1680 tgcactaggc ttgagggcca cctcccagga gctgcccctg actccattct cttgaccggt 1740 ctgttcatca gacctcgacc acggcccctg ccctgctct cctgcccgtt ctcccgcctg

1800 gcctaggaga agccacagca aaccccacgt tccccgccac aaagagaagg aagtccagag 1860 tcagtgccag gctgccacgg ctcaggggcc cagcccacca cagcctttca tgcccccca 1920 cacactectg cecaggaget gaaagageee cacactgeeg ecageeeeta eccageeeta 1980 agactettgg cagcacatet tgctgccggg aagcetetga cacggategt cagtgcacgt 2040 ccagctcctc caccaaaatc gaagcttctc gtgggcagag acgccacccg gcatagcagc 2100 gcatccccat cacccatcaa cctgcacttg gcaagcacct ccaaacagag agagcacaca 2160 cactccgtcg gcagccgaag gagctgcagg atggtgctga gagtgggagc aggccagaac 2220 gaagetetaa cacagaagag eegggtgetg gggaggaeag gggaggaeag gtgggaggae 2280 teaggeeet eeccaggeag gatggggagg ceaegacact tgggeeaget tggagggtgg 2340 cgggggagga gaagagcaga tgcagactgc acctgctggg ggtgacgacg gtgcggcgtg 2400 gccagcccag ccactggcag gcccacaggt cagctggatg gggcagaggt ggggcccacc 2460 ccaacttcca ccgggccttg cctcccagat tcctgagcca aggtttaata acagaaaaga 2520 tggagctcta ggggagcaag ggacgccgac caagcaagcc gcagcagaga ggactgtgct 2580 ggagccacat cggtggcttc tccgggaggt aacgtcctgt gcagactccc agccacaccc 2640 tggcgctgcc tcggctgcct ccctgaatgt cagcggcctg agggacccca ctcggcaggg 2700 agcgggggct gcttgtggga acacacaggg tctgattcca agtgagaggg gtgactggtg 2760 tggcttcaga cggcaccaac cacgcaaagg atacacagct tctcgtcgtc ctgaaatgtg 2820 aagtaaagct taacaaagaa ggggtgatcc aggcgcgaca tgacatcccg ctctctggtt 2880 acatagggga ccttgttctc ttttatgata tgtcgcttct ccagaatttt aacttcaggt 2940 gagagagaag tgagttacta tcagaaacaa caaaaaacac taaagacatg actcacaaag 3000 gtaactggta caaattaaag tctttcaaac attgtacaca acagcctggt ggtctctaaa 3060 gccaacagtg teetgtacce tgaaatcage acagaaacae eggeeetgee acceeageeg 3120 ccctgcacgg agccgcttgc cctgctcccg gacgcacagc tccctgcagc ccatactcac 3180 tegeatatte tetggaggtt geeagttete gageeaggae aacetggttg ggaaagaaaa 3240 ggagaaaaag aaacacacaa tgtaataacc agaccactgc cactctcacg ggtgtgatga catgggacct gcctactggt agtcttctgc cttcgtggaa ttctgcaact tccttcctgc 3300 3360 ctcggccaca gcatgtcaac caagcacctg tcagggtccc tccctggcag gacgatgttt 3420 agaageteag caccgtgete etgeeteete tteagaceea teagaacttg etaccatggg 3480 tgtgttttaa taaataactt catttctgca gcaaataaat aaataaataa atgtagttgc

aatattgcct ttaaaagcac ttttaagcat tgcaccaatt gtgaaataaa aagcccgagc 3540

<210> 197

<211> 3495

<212> DNA

<213> Homo sapiens

<400> 197

60 atgtagttaa gcatcttttt tatggacagt attcaagaat gatagcccct ctttgactag 120 cccctctttg ggtagtcttc aatgcccaaa gcccctcttt gggtagtctt caatattttg 180 atteaaaaca ttgatgaaac aaacaacteg gtacetacet atggetetge aaceaagtac 240 atactaggag tagacttact gagacagctg acactacaca cgttaaggct tttggcatct 300 gagaagcgta ggccatctca acagaatacc tgacaatgtt ctggagacat ctggtaggca 360 ggaggcctgg ggccgggctc tggttcctgc catgctctgc agggatgttg cccctgaggg 420 gatcagcgtc ttcaccatgg acatgggagt gtgggatcgg ctcagctgca agggttctgt 480 cagtattagc tgggattccc actctgtctc tctctcccgt ttccaggtga cctcacggtg gacattecga tgeccaggat geceteagge cetgteteat gatgaetece aettecaega 540 gcggcacaag tgcatcaact ttttcgtgaa ggtgtacggc tacatgcccc tcctgtacac 600 660 gcagttcagg gtggattctg tgctcttcaa gacacgcctg ccccatgaca agaccaagtg 720 cttcaagttc atctaggggc agcgcacggt ctggggaaga ggatgagcag agggaggaag 780 atggetecca aggttectag geattgeagg acettgggea catetgetgg tgggtggeec 840 agagcctctg ctggaagggg cagcaggagg agtggaagga aaccgctgcc tttatcttga 900 agtcagccac actgggcctg gagccctggg cggagtcccc ggggttcccc acacagggca 960 ctgactgata gcttacactg aggactgtgg cgactctgca gagtcactca caccgttcgt 1020 acgcccagga cagctggttc gtggttttta cattcaataa caactattat gattatttaa 1080 aaagagaaag tttcagattt gccattcaag gcttatttat atatatgtgt gtgtatataa 1140 atacatgcac acacttgcat acatatatat ttttggctgg gggagtgtga gttttgcctt 1200 tctaagggag ggaccgcgca ggctcctttg ttctgtattc tggcggagat gggtcctggc

1260 cttgtgtcac tggcttatcc ttaaagatca tctcccatcc tccccagcgc catctgtgtg 1320 cagcaaccag aaagggatga acttggccct cttgcgggcc tggacaaggt ctcttcctta 1380 ccctttctgt tgccagtcag caacctgtaa ctcacattct cttcccagtg aatccctggg 1440 agegeetgae eetggtggge tgtteagett eetgetgetg gggeeagega tttttgagga 1500 tttatcttta ggccaggctt gcctccgtac ttatccctgc tctcccattt ctctcttgtt 1560 tgagagagaa tgaggaagca aagagtgaga aagaataggg gctgaagacg ccactcccag 1620 atggetettt etateetget ettetgttga aacacaegtg etgtgggeet eaggegttte 1680 tgaagtgctc tttcttggat tggacaggag atcagcagcg tgcacatctg ctgtggtctg 1740 aagtggtttg caggtcagcc tcctctcct agtgtagagc aagccagtgt ccttcgagga 1800 acceaecegg ctggeeggga agttttacag caaggegeet geettgggat aatteettgg 1860 tgaaattcac cttcccccg cctctgtctg gagccccatc ctgtgttatc tgtggttttt 1920 ggacccctaa tgtcagcttg gctgtaggac tccccgaggt ttggtatgtg ctagaacaat 1980 gggaggctgt gatttgctgt gtaagctcac atccagcctt ggaatctaac gggcattcac 2040 aacccgagtt accactttcc actccctgct taggattctg ttccctgggc tgaaactgaa 2100 ataagctaat tttttgggtc acggtggcag taggggaacc taggagggtg tgagtggcat 2160 ttgtcaggga tttagcccat gacgtgtttc ttgaacccta ctttctggaa gtggagttga 2220 ctctggaagt tttctagcaa ctgaacaaaa gctcaggttt gtcctggtca tgcacatgcc 2280 ttaagccagt tccgtcttcc ctagaccttg gcatcctgtg cttctatttc ttggaatacg ttctcctctg acctgcctgt accacgtggg tcctcttcaa gtactgtttt gaagctgggc 2340 2400 tcttttgtgt agctcccacc cacctgtagg gctagctcgg cttaagggaa ctctccccat 2460 tggcaaaccg gacccggccg ccgccaggac tgtgtttcca aaggttcccc gccccaacc ccagcatcag cctgtagctc ccctgctgag gcagtgtggt tatgttccca gcagtggggg 2520 2580 teagaegeee tteeteagaa etttetagtt geeetetaee tgaeteetga ettgtattee 2640 ttttagcagt agccttcttc cctcggggag ccaaagagtg tggtgtgtgg cgctatattg 2700 tggctgctat ttcatctggt ttcttttaat gtgaggaact cacatactga cttcagtggg 2760 actcggtgag ccggggccgt ctgtgtggtg ggaccccctt tagcgggact cagtgagctg 2820 gggccgtctg tgtggtggag ccagggcctc tccctttagt ggagccaggt tgtcgggccc 2880 cgaatgtcac tggtggatct aagaagggct gagtggtctg acaccaaaac atgccgcagg 2940 gagggctgtg gtgccggtgc ttccaacaag gacagccctc cttgaccctg aaaggaacac

tggcttgaag	gactgcagac	aggctctgag	gggcacgccc	tcctcagcga	gaggcagcaa	3000
ggtggccaca	gtgtcactgg	tcaggtgctt	ctcaccacgg	gaaagccgcc	gacctgtgac	3060
tcgcttgaga	tgggaaagcg	gcgccacaga	ccccgggtct	ccttggctgt	ctgtgggccg	3120
cccctggcca	ccttgtcctg	gctcgcaggg	tgcaggagcg	cctcgttctc	tgggtggccg	3180
gcctgctgct	ccggtttggg	ctgtcttacc	ataacaccgt	cccagggctc	tgcaggccac	3240
tgtgagcgct	ggctccctgg	gcagtgctcc	tccgtgtgga	ctgtgcctca	ggccagggct	3300
caccagctgg	ggtcctgtcc	ggaaggatgg	gatctttctg	ggagctgcgc	cggacagagt	3360
ggggagctcc	tagtttgtgg	ggggaagctt	tgatatccat	gccacgtcca	tccaccccac	3420
cccttttcgt	cacgagcaca	atggtcttac	attggatttt	tgtaaaaaaa	taaaaataaa	3480
tggagacttt	aactc					3495

<210> 198

<211> 4634

<212> DNA

<213> Homo sapiens

<400> 198

agaccagece ttacctagte ataccgcagt acagegtggg aagtgatgea agectaggge 60 120 tccctgcagc ctgcccacct tcctatcctg ggctctccct aaccaccaaa gcaagagggc 180 agactgctct catgtgtggg tactgcgatg ttttggtttg gtttttatta ttttaactag 240 atggattttc aatggcctag gaaggtttta attggatact ctatgaaggt aaaaaatgta 300 atttctcagg atccctttca tttgctctta tggtcaatgg tcccccggg aaaggctgat 360 gctgtaagct ttgttacatt tggacaagtc agtgaagtta ccccataccc gtcattcact 420 agggacactt ggaattggga aaggcaccag caagctggtt ggaatgcaga gactgcatta 480 gccaagcgtc cggggtccag ccatggaggg tgtcaccgag ggcttgtgat cccttgcctt 540 gccttggttg agaaatccac aaagcttttt taagtctgta attcctgtgt cagcagcgct caggtttggg tgggagaaac ggtgaggaac gatgatgatg aggcagaaat tgggaggggt 600 gctgctctta ggcccctggg gcagagtctt gagcgcctgg ggaagctaac agtgtgtcac 660

720 tctggcatct aggaagcagt atatctcaac tcagttttgc ggaggacatt tctgctgatg 780 aagatgacca aatcctcagt caaggaaagc ataagaagaa aggaaataaa cttttagaga 840 aaactaactt ggaaaaggag aaaggaagca gagtcttttg tgtagaggaa gaggacagtg 900 aaagcagtct tcaaaagaga agaaggaaga agaagaagaa gcaccacctg cagcctgaaa 960 atccaggccc agggggtgca gccccgtccc tggaacagaa ccggggcagg gagcccgagg 1020 cctctgggct gaaagccctg aaggcacgtg tggccgagcc aggtgcagag gccacgtcca 1080 gcactgggga ggagagtggc tccgagcatc ctccagccgt ccccatgcac aataaaagga 1140 aacggccacg gaagaagagc ccgagggccc acagggaaat gttggaatca gcagtgttgc 1200 ccccagagga catgtctcag agtggcccga gtggcagtca tcctcaggga cctagagggt 1260 ccccgacagg tggagcccaa ctcctaaaaa ggaagcggaa acttggagtt gtgcccgtca 1320 atggcagtgg cctgtccacg ccggcctggc ctccattgca gcaggaaggc cctcccacag 1380 gccccgcaga gggggcgaac agccacacca cgctgcccca gcgcaggagg ctgcagaaaa 1440 agaaggcagg gcccggcagc ctggagctct gtggcctgcc cagccagaaa acagcaagtt 1500 tgaaaaagag gaagaaaatg agagtgatgt caaacttggt ggagcacaac ggggtgctgg 1560 agtccgaagc tgggcaaccc caggctctgg gaagcagtgg gacttgcagt tccctgaaga 1620 agcagaagct gagggcagag agcgactttg tgaagtttga cacccccttc ttaccaaagc 1680 ccctgttctt cagaagagcc aagagcagca ctgccaccca ccctccaggc cctgccgtcc agctaaacaa gacaccatcc agctccaaga aagtcacctt tgggctgaac agaaacatga 1740 ctgccgaatt caagaagaca gacaagagta tcttggtcag tcccacgggc ccttctcgag 1800 1860 tggccttcga ccctgaacag aagcccctcc acggggtgct gaagaccccc accagctcac 1920 ctgccagctc acccctggtg gccaagaagc ccctgaccac cacaccaagg agaaggccca 1980 gggctatgga tttcttctga ggagcagcag agtcccttgt aaaagactgc ttttgtacag 2040 aatgegetat aaattatace tttaagaatg tggggeettt tttatgattt tgtaagttee 2100 cataagttgt gtgcacgagg ttctgagagt gcccgcaggc tgctgcgtcc tggcccctct 2160 gtagtggctg cgggcgtctt ggttgaatct tttgctacaa accatgtttg cgtttgagct 2220 ctccaggatt ttacattttt gggtaacctc agtgattccc attggtgtag gaaatgagac 2280 cctctctgaa gctgaggaga gcacgttgat ctgaacttta aatcaatcag tgctgctggc 2340 acaatgaaag gtggaactgc acttctgttg agctctcagt tctgcggaat ttggtactca 2400 ttaccgtatt cgccgtacta agttggtttc tgttagtctt aacagtctgt tttcttttaa

aagcatgtag ggcttcattg ccatgttctg tgggtgtttg gcaggttacc gatggggaag 2520 attettgtca cagaatcage aataccatag tttttctaca tgtgctcage tgggggtgtg 2580 gacaggtagg ggtggggaaa gaagaggctc tgcgttctgg gggctttttc ttctcctccc 2640 cctacceggt ttccctcct gttttcctac ctctacggca agcccaaagt gtcttcccgg 2700 gageceageg cageeeegg etettaceea ggaeeeegee eegtgetgag eettetgetg 2760 aggtccttgc gtggagcaca ctcattcctc caagcccttg cgctcccgtt tctctctct 2820 teegteeacg tteeageega gteaetgeet gaeeggetee atggeagete eccatettee 2880 ctagaggctg cctgcgcatc tggagcctgc gctccggctc agcgaccttt cctctcaaat 2940 gcggaagcgt gcacttacag ttcagaccgt tctcctgtaa gttcattaca aacacgggcg 3000 gaaggcactc aggctttcgt tggagaaaca gaaataaggc cttcttttga gcagcgattg 3060 ctggatcatt gatctgtttg aggaagtgtc tgacctgggc ctgagagctg gagaaggtgc 3120 agattcaaag tgagcggctc ctgaggagag ccgccaaggc tgctcgcctt ctccgtggct 3180 tccgcagcta ccgtctgcac ggtgagaggg cacgggcaca cggttcgggc tggcgtgcag 3240 ctctcccagc cagccacgct ctgctcaggc ctggaagtga aagccgcctc cttcccgtta 3300 tgcccccat acaggagcct cggtttttca gcaaaacgcg gccagtcccc ttctccactg 3360 etgectecca geagagggee ceaggatete caaggteeca getatggett tggacaaegt ggcttcggcc cctggggttg cagagcttgc attgggttta cctcggtctc attcattcat 3420 3480 ggagccaagg gtggggtttc acctgcgaac atcagactga cttgctggcg tcaagagcag ttgactcact gatgaaggcc ctggtgagga gaaagcactc tgttcttcgc ctactctgta 3540 3600 atcgttttgt cataatgagc catgaaaaaa gtaatgaact tgtgctgtta atcgtcactg 3660 taatgagaag tettaegtae aacatagttg tggtggetta atggetgeat tagataggat 3720 cctcacatcc cattcagaac caaaactgat acagtgaaac aattaaggtg agcaaatagt 3780 tttaactttt ctttttttt tttaagtttc attcttccta gaatattttt ctaacaattt 3840 ttatttcagc tttaaagatg ggtcatatag ccaaacgggc catataatcc aacattgttg 3900 agatgtetta ggacatetaa ggeaaaaetg geacatttgt tetgeagaet attgeaggaa 3960 tgttttttcc tagcatttct atattatctg tccattctga ggaaccagtg aatgtcctat 4020 aaatgcacct cctgtcaaaa ccatgcctga gaggtcccgg ctgggagtga cagggtgctt 4080 cttagattct attggtcctt ctctcattct ccgaacttac tcctttttat gggtaagtca 4140 actaggttta cagtccctta tttttaatgc ctaagttttg acagcaggaa gaaaacaatt

4200 ttttaaaaat tctcattaca tagacgcaca agaatatgtc acataaagaa aatgtgttta 4260 gaatactggt tttctattta cgcatgatat tttcctaagt aaaattgcca agtggacttg 4320 gaagtccaga aaggaaaata atttaaatta atgctggtga tcttaacaat attttgtaaa 4380 atgatgcttc ccccttctcc atggtctagt caattttgta caattaggta tctgacttta 4440 caagtttgtt atcctttcta atttttactg aactgaaagc acaaagaaga ctacacagaa 4500 aatctggaaa cagttgcagg tgttgggagg aagatgaagt cgagctgtct tttaactttt gtatgtgttt tatcagaatt tgctggacta tgctggcaag gactttgttt acgatcaaat 4560 4620 4634 agtctttgcc ctcc

<210> 199

<211> 3773

<212> DNA

<213> Homo sapiens

<400> 199

60 gttaataaaa acaagaatgg ttattgggag ataagggcag gccaactcca gatttataaa 120 gttgagactt tttacactgg ctggattccc agtctctgct tttagtctcc tcaggagaaa 180 acaaattett gttgcaatga agageeteae acatttetee aaggageaeg teagegetgg 240 atttagggct cccagttacc ttacaaaaaa gttttgaggg gttttacttg ttttatttat 300 ttttttcttc ttaatgaaca aattatggtg atgaacaata agctttgtcc tcccctgttg 360 ctccaagage teettteeca cageetgeet caggageagt gtetgagete tteeetggtt 420 gtttcacatg acagtggcct tgctgaaaat gaaggtgctg agtggtttct cccatgttta 480 tccactgtct tcagtaatga tggagaacac ctcacataag gcagactctt cacaccatgt 540 caaaatgcaa ggaaaaaatc tccctcaagt agacacacag gccactgtct gtctcgtgtc 600 tggttctgat ggctgcacag agccatcgac actgcttagc agtgaccccc tctgccctgt 660 ggcctgcctt cagcctttca ggccgtcacg gaacatctgc gagaaagccc tccaatagcc 720 aaagcaagag tttcatgctg ggttctttgt tgttaatctg ctttaaatat attgaatcaa

780 tagttacttg agaattactc aaagtttcca gaagtacaca acgtgttttc ttctcttgat 840 atttcacata cctcgggtaa gcatggcatc taaagctctc gtcatcgtgt gctcttctcc 900 tgatggtgtt gacgacccag tgttaacagg gaatggttat tctgtacggg catctgaact 960 gaaaagtgag aagagcgaac tttgcctcct cggccccttc tctgtgcctg tggcttatgc 1020 gtgtgcccct ctcctctttg tcactgcttc ccttgccctg gatgtggttg gtgcactggg 1080 gtcaccttag accacaggaa atgtctggtt aacacacgaa gagatggaaa cgctcgcagc 1140 cacgccgcaa acggttagtc acgccccaca gcctgcactc ctcccagcgc gttttccact 1200 taagaccgtc tgggttcttt gcctttttgt tgaaaacaaa atgttgtttt ccattcagtc 1260 gttccagata agtatttcct ttagttatta gttgaaatgt gtaagtagaa tttgtatttt 1320 attttagatt ttttccagga acttcaagtt ggtagactct gtcttttaga atagctttaa 1380 tctagctctc cttttggaga gatctcagtt gagcctccat gtgactgact gtgtggccct 1440 ttctccttcc atgaatatgc ttggcacgga gagagtctgc tccttgcatg agaagttgaa 1500 attgttggtt ttgcatgagt tttgcatgat gctttgatag tctgaacttt ttcactcagt 1560 gaagetgeat etteeetgea gagttgegtt geetgeatta eegageteae eaataetaat 1620 agttatgttc ttttgcattc ctaaccacgt aaccccagga agatgaggag ggaagctggg 1680 ctcagacact cgcctatggg gacatgaacc acgagtggat cggcaacgag tggctcccca 1740 gcctgggcct ccccagtac cgcagctact tcatggagtg ccttgtagac gccaggatgc 1800 tggaccactt gaccaagaaa gaccttcgag ggcagctgaa aatggtcgac agttttcaca 1860 gaaacagttt ccagtgtgga attatgtgcc tgagaaggtt aaattatgac cggaaagaac 1920 tggaaagaaa aagagaagaa agtcagagtg aaataaaaga cgtgcttgtt tggagcaatg 1980 atcgagtgat tcgctggatc ctgtcaattg gccttaaaga atatgcaaac aatcttatag 2040 agagtggtgt tcacggagca cttctggcct tagatgaaac cttcgacttc agtgcactgg 2100 cactgctgtt acagatcccg acgcagaaca cacaggctcg tgctgtcttg gaaagagaat 2160 ttaacaacct tttggtcatg gggactgata gaaggtttga tgaagatgat gataaaagct 2220 ttaggagagc accttcatgg agaaaaaagt ttagaccaaa ggacattcgt ggcttagctg 2280 ctgggtcagc agagactete cetgeaaact teegggtgae ttettetatg tetteeceet 2340 ctatgcagcc aaagaagatg cagatggacg gcaatgtatc aggaacacag aggttggatt 2400 ctgctacagt caggacttac tcctgctaaa gtctcctgtt gtttacccac actacttcta 2460 cagatgatta tgcagcattt gaatccaaca aagactacat tttggaatcc agtggaatct

2520 ttaatcttgt taatacttgt tatatggacc ctaagatatt ttattacaga gtttttaatt 2580 agtgaaaaat tcatgaatac catagagaaa atattttaga atttaatgtt tcttatattt 2640 atgtaaactt atgactette atttatatag ttaettaett ttteatgtat atceaggeta 2700 taaatatcct ttcaaatcat gttcttatac ctaattttag tctttcaaat gaatgtactg 2760 taatgcttgt atgtataaat cctatgaata gagggctttt gtaaattatg catttattgt 2820 aattatcatt aattttttaa tgataaacca tgacaaagga ttttacgttt ataaaattat 2880 gacagaagcc atgtgcatta tcctttacgg acgcagccta gctctacagc aatcatcctg aaataagcat acctaatttc aagcaattgt tgtattttca tgactgacct taactgtact 2940 3000 ttttctagca agagatgctt tattctgcag catgaacaga tttaaaatgg ctggtgttaa 3060 atatcagete etaataagat gtggactgaa aacaetatea caacaetatg agaageeeet agcactggtt aacgetttcc tagcctagtc tetggatttg gggagettgt etteagtgge 3120 3180 tgagactgtg agctgggagc agttctctca gctggagaga ctcgggatgg ggtaacctgg 3240 ggaccagtct agcccctgca ccctcttccc tgcctctgct ccttgggagc gggtggagag 3300 acacccatgt ggctcccctt agggccagca ccaagcacca cgctctcatc ctgcaagtcg 3360 gcgcacacag tggatgaagg caggagaccc agaaagcagt gcagtgcagc tctaataaag gccttatttt tcttatgtaa atcatctttt tacatttgtt tgtaaacatg tttaaagaac 3420 gaacctagtg ggacattttt agactttgat gctctagcca ttttggattg tgtaagttgc 3480 3540 agatgtggct tttacttttt aaatggcata ttaacaagcc agcaaagtgt gtcagaccat ggcgtggtat ttattgtgca gcagatccag agacagaggc agcctgtctt ttcagttggt 3600 3660 ttctgctttt aatttacttg tacaattcat tgttactgtt ctgtttttct attaatcttt 3720 tgtcaacttc ctgattatgt aacaaagtat gtacagtcta cttttgaact atttttatca 3773 cagtattatt tattgctttc tttcaataaa gtactgaagc attttccact gcc

<210> 200

<211> 3567

<212> DNA

<213> Homo sapiens

<400> 200

60	agggcagggt	ctggagcccg	aagcgggaaa	gactgtggag	gggaagtcag	gctcacgatg
120	acgacctgga	agtgagacca	ctcaaggcca	gacagcaatg	gacccatcca	gctcaggaga
180	ctgaccagag	gacgagggtg	ccacacatgg	caggtactga	aaagcagtgc	atccagggag
240	gaagaactcc	aggagggagt	caggtatcat	tacacaggat	actgagcatg	ggatgagggc
300	agacccgggt	gtggacggag	agacctgggt	cacggcagag	caggaaggag	cagcaaaatc
360	gtggacagag	agacccgggt	gtggacagag	agacccaggt	cactgcagag	gtggacagag
420	gggaggaaga	ttctgtcatg	ggacatgttc	acctgggtgt	gtggacagag	agacccgggt
480	ggcgagaggg	agcgagggag	aacaggaggg	gaggagagga	caagaaggca	gaagggagag
540	ctctgctgga	tgcgtccttc	tcgggcaagc	gagatgcatc	tctgtagtaa	agaacacccc
600	aggggtctgc	tggcagatag	gtcggcaggg	gctgggtggt	gctctactgt	ggcccccatt
660	ccatgtgtcc	ctgggccagc	tccacccccg	aggagtgagg	catgtgtccc	tgggccagcc
720	ggtccactcc	ccaggagtga	cccatgtgtc	gctgggccag	gtccaccctc	caggagtgag
780	catgagcagt	ctgctggcga	aggtccactc	cccaggagtg	gcccatgtgt	cgctgggcca
840	cagcaaggaa	ctcttccaag	gaagcccctg	ggaggcagag	gagggtatgg	gctttctcta
900	gagtgtaaga	actctcttct	ccatggctgc	caggccttca	ctgcaccctt	gggtgatagc
960	cagacccaag	ttgggcagcc	ggagctgcga	ctggcaagca	gtaacagacc	agcttctact
1020	cgatgtaggg	ctgcaggggc	ggctgggacc	ggcaggccag	ctgagcccgg	gcacagggag
1080	cctcaggaac	cagagcccat	cctacgaggg	cggtggcctc	tacaggtgct	ctgtagtcat
1140	caccatctct	gtctccctca	cctgggcagt	ccgcttcttc	ggcctggcct	ggtcaccacc
1200	gccctctgc	gctcccagag	ctgaaccgct	cagtgagggg	cctgtctgtt	gagcctcagc
1260	tgcctcctgc	tgcaggacga	gcaggacgtt	ggccctgact	tccggcctca	ctgggcagcg
1320	ctctggccgc	tccatgtggc	cctgttcctt	tcacatcctc	ggacaatctc	ctcctccgg
1380	ccatcaaaat	atcctctcct	tctgggcctc	gtcctgtttc	aactgctgaa	ctcgcatctg
1440	tctgtgttga	gagtccccgc	aagccacgtg	agcattgagg	ggactgcagg	gaggaaccgt
1500	ctgtctgaaa	gtggcgcccc	cattctgggc	tgtgggcggc	gtgcccttcc	gccccgtagg
1560	aaggtagcac	gccagggaca	gtgacaagct	tgtgctccgt	accagctccc	tcagcagcac
1620	gcaatctcca	cattggagcc	ttctaaaccc	ttcttcctca	acccaggctt	ccggacaagc
1680	agagaaactc	atttgctgac	tttgtgttgc	acaaatcctg	cagcttgtta	ggtataatag

1740 ccctgggacc acagcagtag gcacggcatt cctgtgacag aaatcaatgc cacagatcga 1800 gggatggagc caccggctcc ccaggttgag tccccttccg gtaacacggc cacactcctt 1860 cctcctcca agaagatccc agggagggcg atcccgcctg gatgcgttcc tcactccctt 1920 tcaggtggcc ccagacgctg ggcattggga ggtggccacg tggggacatg gacatgaagg 1980 ctgggtaagt gtggggacca ggcgagctgg ctgctggaca cccacccacc ctgtgagctg 2040 caccagaccc tactctctgt gctctggacc ccaggaagca gtcaggattg ggggggtccc 2100 actcacagge eccggegeet tecacetggg eagetgeeat gtgeaceete aggetteaga 2160 ctcctggcca cgggggcggt ggtgtggacc ccaggccgtg tgtgcagatg cagcaaggtg 2220 acatcagcca tacattcact gcgtcactcc tcacccagct ccttctcaga gcctcactcg 2280 gaacagcaca tctcccatct cagctgccct ggccacttct gtgtaggagg caggagggat 2340 acteceacea eccegaceet tacagataac aggeteagaa aggeacetga ecceacagee 2400 cttcagttgg gtttgaacct gggttgcttg gtttcaaagc acaggggttt gtcctgccca 2460 gtcacacccc tcaaagtgtg gatgtgggaa acaccgctga ggagcctgga catccaggag 2520 ggctcaggag accettcetg actgcaccce ggacaggece acgacaggea gatgggacae 2580 aggtcaggat gtggcaggca cacggcctgg cttctagaca cttctcagac ctgggagagg 2640 agagaggac aggtggtgtg ggcgtgctgg aggcgggaag gggataagag tgttggttat 2700 cacgggcaat gtggacacac ggccaggaca ggggtccaca gtatttcagg aacctcccac 2760 aagacgaaac ttctagacag acttccctcc ctgtgagata ccttaggctg tagtggagag 2820 gtcgctgaaa gaatcgatat ttctagaaat tagctttggg atcagtttgc gaagctgcat 2880 ctatgctgac aagtgaatga agcccgttgg cagggaatac actgaggcct taggcctgca 2940 gaagagcaca ggtgcacctg cgccacatgg gccagaatca acccaggtga attccagccc 3000 atgccattga tgccaaccat ggacgaggaa tccagctggg gctgaagttc cgctacgctg 3060 tcagttccac tggggatgtg tgttgctcct tcagcctctg ccagacacac aggcccggtt 3120 ccagcacccg ggtgtttgag gccagtgtgt gagtcagcca gggagcctca gcctttccca ctggcttcaa aaagatgtgg aggctgatgg ggaggaggaa ggttccccag agcaggaggc 3180 3240 catctgatgt aatgaacatg ccttcctaag acgctgcctg ggccgcagcc aagtgtggtc 3300 gctctctgag caatcgatgc tgccacaaaa ggtcctggca gcagcggcac gacccctgca 3360 ccccgcctgc tgcatccagg acagcgccgg cctcccacgg cggctcccgg gagaagagga 3420 gacgccactt tggctgctgt cccggggaga ggggggacag tccttcgact tcatgcaggg

gettgteaac eecaaagett eeteegeege eatetgggte tgaegetete egetggaagg 3480 tgtteaggag etggeaceee aegteeacea gegetggett eaaateaaac aataaacage 3540 atttaaaaaa aattagteee aeaggte 3567

<210> 201

<211> 3695

<212> DNA

<213> Homo sapiens

<400> 201

60 ctatttttaa cttttattgc tagtgctttc ggtgttatat ctaagagttc attgctttat 120 ctaaggtctt gaagatttcc ccctatgttt tcttctaaga gttttaaagt tttagctctt 180 atatttaggt tgttgatcca tattgaatta aattttgtat atggaatgat taattttata 240 tatgatatgt tgtatatggg ttcaacttca ttctatggtt atttggtggt ccaagcacta 300 tttgttgaag agtettttet ttgcccactg aatggtettg teaetettgt tgaaaataaa ccctataggc ctatgctggc catagggttt atttctggac tcagcatttt attccattgg 360 420 tttgtgtgtg tgttcttaag cctgaacaac actattttga ttattgtgct ttgtagtaag 480 ttttgaaata aataagette etattttgta tttetgtttt ttttttgttt ttttttttt 540 gttacagggt ctcactctgt tccacaggct ggcatgcagt ggcatgatct cagctcgcta tataacctct gctttcgtgc ttaagtgatt ctccagcctt aacttcctga gtagctggga 600 660 ctataaacat gagccagcat gtttgtctaa cttttgtatt tttggtagag acaaggttgt 720 gccatgtcac ctaggctgat ctcgaattcc tgagcttaaa gcaatctgcc tgcctcagcc 780 teccaaagtg etgtgattae aggegtgage eaceatgeet ggeeetattt tatatttett 840 tttcaaaatt gttttggctc tttgcagttg tatatgaatt tgaagattag ctttttcagt 900 ttggttcaaa aggccattgg aattataata gggattgtac tgaatctgtc aattgcttgg 960 tagtattagc atcttaacga tgttaagtat agtgatccat gaacatggga tgcctttcta 1020 tttatttaag taatetttaa ttgtgteage agtgtattat aatttteatt gtgtetttea 1080 ccttcttagt tgaatttatt cctaggtata ttattatttt gggtgctatt gtatgtagaa

1140 ttgttttctt aatttccatt ttggatcatt tgttgctagt gtacagatac accaccaatt 1200 ttggtgagtt gatcttttat ttatttattt ttgagatgag gtcttacttt gtcacccaag 1260 ctgcagtgca gtgatgtgat catggctcac tgcagccttg accacctggg ctcaagcaat 1320 gctcccgcct catcttccct agtggctggg accacaggca catgccacag tgcctggcta 1380 attaattttt ttttttttt tttttttaga gagagggtct tggtatgttg atcaggctga 1440 tetegaactt etgggeteaa gtgatettee egeettgtee teeegaggtg etgggattae 1500 gggtatgagc caccatgctt agctgtgagt tgatcttttt tgtttgtttg ttttttttga gacgggattt tgctctgttg ctgagggtgg agtgcagtgg tgtgatctcg gctcactgga 1560 1620 acctecatet eccaggetta agtgateete ecaeeeegge eteeeaagta geagggaeta 1680 caggtgtgcg ccactatgcc cggctaattt tttttgtgtg tttttgtaga catgggtttt 1740 catcatgttg cccaggctcg tcttgaactc ctgggctcaa gcgatctgcc tgcctcggcc 1800 tecaaaaatg etgggattge aggegtgage cateatgeee ageetgtggg ttgatetttt 1860 atcctgcaca tttgccagat tcgtttgtta gctgtagtag tttttggtgg attctgtggg 1920 attttctata tatagagtca tgttatctga aaatatatag agatagtttt acttttctgt ctccaatttg gatgcctttt cttccttgtc aaatttcttt gtctaggact tctagtacag 1980 2040 ctttcagcct ttaactattg gatatgatgt taggtgtgtg tttttcatag aagtttcctt 2100 2160 ctattcctca tcctcattcc tccatccagt ggaggtggca gggggtgaaa tggactctgt gagggtcatc cttagttttg gttgtttaat gctctatctt tgtgctggtt ggccttaaac 2220 2280 atgtagatga atttcacagg aatattttta ctgtgttgag tcttacaatc catctacaca 2340 gtacgettet etaattattt agatteettt gtatttettt eateageatt ttettttte 2400 agcatgtaag teetatatat gttttgttag atttataeet aaatatttta ttteetttgg 2460 ggcattttta atattatcat atgtttaatt ttttattttg attgttcatt gttaagttat 2520 agaaatgcaa tttatttttc tgcattgatc ttgtgtcctg tgaccttgct taactgttta 2580 attttaggag tttttgggtg gattccttta gatttcctcc ataaataata ataccaccta 2640 2700 ttctaccctt tttaaactta taagttaata tttatacctc atggattctg cctccatgat 2760 gccgttgtaa gcactttggc agagctcatt agtaacatca agcttaaaaa atccagtgta 2820 ttcttttcat ttattttttg attctcattt acctttgcca tttaatactt gtcatctctt

tccaaaaact	tcactttctt	ggctcctctg	attctttccc	tacatctttg	gcaccctgtc	2880
tctggctcct	gttgttactt	ttctgctacc	tatcccacat	ttaaatagga	gttttgtagg	2940
ttttcattat	tttagtgctc	actctccttg	gataatttta	ttcccaatgg	atttagttat	3000
cattatatat	tttttactca	caaaatgcta	ttttaggggt	cagtcttttt	tttcctgaac	3060
tccagcataa	gagctaaatg	ggccttcacc	tatatgtccc	atagaatgtt	ccaaactgaa	3120
atcatcttaa	acctcaaatc	ctttcctctt	tatgtatttt	ctgtgtcagt	gaacaattcc	3180
actgtgtgct	ttcaatccaa	accaggaacc	ctgaggtcgt	ccttaacttt	acccatccct	3240
tatatcaatt	attcatcagt	ctgttttcta	ctgctttcct	atctcttgag	tgtatctatt	3300
agctttcatt	ggtacttcga	atcatttttc	acactgtctc	tagacatgat	attcttaaat	3360
gtgggtcatt	tcctcaaaac	ttcttttcta	gttcagtgat	tttctcagat	cataaactta	3420
tgtgcaactc	ataagaaaga	gactgaaatt	ttttgtaatc	tagttgtttt	cgaagtgtga	3480
tctgaagacc	tccaggtgtt	cccaagtttt	ttctttttat	atacaaaatc	aacattattt	3540
ttctaatact	aagacatgat	tcatgattta	ctttttcac	cctcattttc	tcatgaatgt	3600
agtgtggaat	tttccagagg	ttatgtatgg	cactggaaca	gactgacggc	agaagcaaat	3660
atgagaatgt	agctgtcttc	tcttaagtca	gattt			3695

<210> 202

<211> 4161

<212> DNA

<213> Homo sapiens

<400> 202

cgtatatata	catgtatata	tatatatacg	tatatataca	cattttcttt	atccactaat	60
tgattgatgg	gcatttgggc	tgattctata	gttttgcaac	tgtgaatttt	gctgctgtaa	120
acatgtgtgc	aaaagtatct	ttttcatata	atgacttatt	ttcctctggg	tagataccta	180
gcagtgggat	tgctggatca	aatggtggat	ctgcttttag	ttctttgagg	aatctccata	240
ctgctttcca	tggtggtggt	actggcttac	attcccacca	tcagtgtaaa	agcgttcttt	300
caccacgtct	gtgccaacat	caatttttgc	tttttttgtt	tttgtttttg	ttttttttt	360

420 gagatggagt ctcgctctgt cacccaggct ggagtacagt ggtgtgatat cagctcactg 480 caacctctgc ctcccgggtt caagcaattc ttctgcctca gtctcctgag tagctgggat 540 tacaggcaac tgccaccatg cctggctaat ttttgtattt tcagtagaga ctcggtttca 600 ccatgttggt caggctggtc tcaaactcct gacctcctga tccgcccacc tcggcctccc 660 aaagtgctgg gactacaggc gtgagccacc gcaccccgcc ctatttttgt ttattttaca 720 cgtggtattg cattgtgatt ttgatttgca tttccctggt ggttggtgat gttgagcatt 780 ttttcatatg tttgttggcc atttgtatat cttcttttga gaattgtcta ttcatgtcct 840 tggcatgctt tttgatggga ttattcttgc tgattagagt tccctgtaga ttctggacat 900 tagtcctttg tcagatgcag tttgtgaaaa ttttctccca ctctgtgggt gatctgctta 960 ctctgctgat tgtttcctat gctgtgcagg aggcttttag tttaattaag tcccatctat 1020 ttatctttgt ttctattgca tttgcttttg ggttcttggt catgaactgt ttgcctaggc 1080 aaatgtgtag aagcattttc caatgttatc ttctagaatg tttgtggttt cagaccttag 1140 atttaagtct ttgatccatc ttatattgat ttctgtataa ggtgagagat gaggatccag 1200 ttttattctt ttacatgtgg cttgccaatt atcccagcac tatttgttgt atagggtgta 1260 ctttctctac tttgtttttg tttactttgc tgaagatcag ttgggtgcta ggtatttggc 1320 tttatttttg gcttctctac tctgtcccat tggtcatgtg cctgttttta tgccagcacc 1380 atgctgtttt ggtggctatg gccttgtagt atagtttgaa gttgggtagt gtgatgcctc tagattggtt ctttttgctt agttttgctt tggctgtgcg gactcttttt tggatccaat 1440 tgaattttgg cattttttt tccagttcta taaagaatga tgatggtata ttgatgggaa 1500 1560 ttgcattgaa tttgtggact gcttttggcg gtatggtcgt tttcacagta ttgagtctac 1620 ccatccatga gcgtggaatg tgtttccatt tctttgtgtc atctatgatt tctttcgaca 1680 gtgttttgtg gttttccttg taggggtctt tcacttcctt ggttaggtat attcctaggt 1740 1800 gtggatagca ctgctactga tttgtgtaca tagattttgt atcctgataa atggatttat 1860 tgtatatttc taaatggcaa taagatttga aatattccca acacaaagaa atgatcaatg 1920 tttgaggtga ttaatatcct aaagaccctg atttgatcat tacacattgc atgcatgtac 1980 cagaatetea catggaceee acaaatgtgt acaattatte tetateaaaa aetttttta 2040 agaaacatgc aggaatacac tgtacctctt ccttgctgtc tctggatatt gtcacatgag 2100 gacttgacat gcggattgtg gcagcctctg tgaccaagag cagaagacaa tagcagcata

2160 gaaacctcaa gtgaaaaacc taacatctca agctactaat ttagacaccc ttggcatcag 2220 ctatctccgg tcttagtaca tgaggtgata agccccactg ttcaagttgg gtggccatca 2280 attgctgcag aatagaagtt aatgaggctt cttcctcctg gaacccctac tagaccctga 2340 catacccatt cagtcacagg cagaaaggga agcagagggt aaggagacct ggctggctgt 2400 gccagaccca gatcttacct gtcctgctta gaacactcaa agctcaattg gttaaacaaa 2460 aaaaggaaaa agacagtaag gagtataaca ctccccaggt gcaacttaat ctaacactct 2520 atactttaaa ttttctaaac atacatagaa atcagaccac tacttctgca gaacatttta 2580 ctggtaaaaa gaaaagccca catgagggaa aactgatttg gtggaaagac aacaaaaaca 2640 aaacatggga aataggtaag gtgataacat gggggagagg ttttgctcgt gtttcaccag 2700 gagaaaatca gcttcctgtt tggataccca ctagacattt gaagttctac aatgaaccca 2760 tcagagatgc aaatgaaagt gcctccgcag agacagaaaa cccacaatcg agcatcatcc 2820 acccgcagga tgaacaaaat ggtgatatca gaagaacaga taaagttacc atccaccaag 2880 aaaacagcac atgtggagag ccagggagaa gaatagaaag aaaaagagac ggagatcaga 2940 3000 agagaccata agagaaggga gacaaagaga taaaaggtgc gagtcagcag gtgaggagaa 3060 agactgaaaa ctatgagaaa cagcaactaa gacacaaagg aggtgggaga ctgcctgggt 3120 gccgcagcac ccacaccgtc ctgttgcccc ctgtcagttg ggttaaaacc accggaaatt ccactattgc aaattttgta ttaattcttg tatgtctgac ttttctattg ttagtctaca 3180 ggtgtatcca gcagctccag agagacagcg accagggaga aggggccatg atgacggtgg 3240 3300 tggttttgtc aaaacgaaaa gggggatatg taggggaaag aaagagagat cagactgtta 3360 ctgtgtctac atagaaaggg aagacataag agactccatt ttgaaaaaga actgtacttt 3420 aaacaattgc tttgctgaga tgtttttaat ctgtagcttt gccccagcca cttttcccca 3480 accactttga cccaacctgg agctcaaaaa acatgtgttg tatgaaatca aggtttaagg 3540 gatgtagggc tgtgcaggac gtgccttgtt aacaaaaagt ttgccagcaa tatacttggt 3600 aaaagtcatc gccattctct agtctcaata aaccaggggc acaatacact atggaaagct 3660 gcagggagcc ctgcccttga aagctgagta ttgtccaagg tttctcccca tgtgatagtc 3720 tgaaaagtgg cctcgtggga tgagaaagac ctgacagtcc cccagcccga cacccataaa 3780 gggtctgtgc tgaggtggac tagtcaaagc ggaaagcctc ttgcagttga gatagaggaa 3840 ggccactgtc tcctgcccgc ccctgggaac tgaatgtctc ggtataaaac ccgattgtac

atttgttcaa ttctgagatg ggggaaaaac cgccctgtgg tgggaggcga gacatgtttg 3900 cagcaatgct gccttgttat tctttactcc actgagatgt ttgggtggag agaaacctaa 3960 atctggctta cgtgcatgtc cagtcttagt accttccctt gaacttcatt atgacataga 4020 ttctattagt cacatgtttg ttgctgacct tctccttatt atcaccctgc cctcctacta 4080 cattcctttt tgctgaaata atgaagataa taatcaataa aaactgaggg aaatcaaaaa 4140 aaaaaaaaaa aaaaaaaaa g

<210> 203

<211> 4595

<212> DNA

<213> Homo sapiens

<400> 203

60 gtataaccag gtgctgctgt ttcctgagag tccccagggc aaagtcctcc aggtgatcgt 120 gtgggggaac tacgggcgga tggagcggaa gcagttcatg ggtgtggctc gcgtgctgct 180 ggaggagctg gacttgacca ccctggccgt gggctggtac aagctcttcc ccacctcctc 240 catggtggac ccagccacag gcccctgct ccggcaggca tcccagttgt ccctcgagag caccgtgggg ccctgcggag aacgatctta gtgctggaat ggggaggggc tccccaagat 300 360 ggcctggaga ccacccagcc ctgacctggg accccaggcc caggggcaca ttgaacagga 420 ggacggggct ctccccaca gtggggaagc agaacgggga gacctgcccc cccttgggcc 480 cctcctcacc ccttctttgc ctcctacccc cgagacctcc cctctcccaa cgggattggc 540 tacacttttg acttggccgg ttcttgacct ggtggatgtg gctgcagtcc agagaaagga 600 aagattgagg tggcagagca gaccactctc ccttcccaaa ctgtccaact tctcccctt 660 tttgcctcct cggaagctcg ctgcccagag ccatgtccag aacccagccg gccatctcca 720 tggtgccaat taccagcaag tgtctttcct gcggcaccgg gttcaggcag ctactcctgc 780 cccagagatg aaggggcagc tttgcaagga tccggagcca gctcccaggg gcccagagcc 840 ccccacttga agaggagctt gagcttccct ctgcctgccc gtggaaggag ctttgccgca 900 gcctgtccga gtccatccgt ccgtccctc ctgcctgccc ctcttctggt ggctctagga

960 attggggttc agcagggacc aaaggaaagg aggaggtgcc gggggcctgg cacagacccc 1020 taggtgcctc gctccatggg attgcaacaa gctagtttag gaaccgctgg cggactagaa 1080 agaatgttgt cgtctgtgtt ccggtggagg agctgtggaa cctgagtttc cagaacccca 1140 accctagaga gcatttgggg gtgctgtatt ggagggggag gctaaggaaa gttgggattg 1200 ggactggtgg tgccaagata agggtttctc aaattggaga acccctcctt gttgcatgag 1260 gtcaatggtc atcttgtcta cccaccctgc ctccaggcca gggggctggg gaggcaaata 1320 gagccccct attttagtct ttttaaaaaa aacatcctat actaagggca gaacccactg 1380 ccccggcctc aattaccttg gctgaaggaa agatggcggt aggagagaaa agtgaagagg 1440 cgtgagtgta agaactggga gattcctttt ccagcaggcc tgggtagctg ccttcccagc 1500 ccagccctcc ctggggcctg cgggagccct tttgcatgca aggggggatg gaggctggcc 1560 cctctttata gaagcacatt tctgccacct cccctgggag gcacccagaa gcctgccact 1620 ctttacctag tccctgctgt gtagggcgta gtccaggtta gctaggtaga gttagtgctc 1680 caagecetgg ggeetgttet tageteatge atagteetta cagagteeca ggacegggg 1740 tggagaggag cctcaagtac attccaggag accactgtct cctcgctggc ctgggcctag 1800 atggggcagc ctggctcaca ggaggccagc ccctcctct ccgcccctt ccttccttg 1860 tccccgtagg gttatagctg gagctgcctg ttatactcgg ctgttctgat ttattattct 1920 tggtactgac tttctttatg agggactcct aagggttgta ggaccttggc agaggggcc tggtctccat tagagggtgt tgttttctcc tgaggacacc caggctgcct ttggtcccac 1980 2040 cctgttcctg gtcccggtcc cggtcccagt cccaccaggc aactccttcc acccggaaat 2100 tetteeette eettageetg tggaaaceet gggtattett taaagttetg gteaatgtat 2160 atcacctcca cagagetget taccetgeac tgggaagggg agatggagac geceeettta 2220 cccaggaggt cttcagagtt tcctgggacc gcggtgggtg gaatcccaag gctgggggtg 2280 gaaggagcag ggctctggag ggattcgcat tcaaggcaca gaattggccc cttgcctgtt 2340 tgtttttcta accagtgtga tttctctgct gttcgtttat tacttaccat tggaatattt 2400 tgagccagga gagcgccttc tctctccagc catcaccgct gtggttgttc aggggtagct 2460 tttcaaaaac agggcagagc ctggctgtcc caaccagggg gagcaggggc ttggccctga 2520 cagcetgage cetteceetg gtgtetgeae ageetttata aagagagaga gageteegaa 2580 gcaataacaa cacctggggg tggtcagtga gggccccctc aatgattttc ttgtttgttc 2640 tgtgaaatcc cgctcacctc ctggaggggt ggagcagctg ggggctggag ccctgtttct

2700 ttgtgtcatc gtgagcatgt gccccttccc aggggctgtg accattgggt gtgggaacta 2760 cggtctgtcc tcaccaaggg atgggggttt ggggaggaga gtgacatttt catcattagc 2820 ttcggagaag cttcaagccc atcctgtccc cgctactgcc tggccccttg ctgactcagg 2880 ctgcactgtt tgaagaggag cagagaggct ggcactaggg gccactgggg ggctggggtc 2940 tccaggggat gactgttttc aatctctggg ccaagatcac atgcaggata ccacgggaag 3000 gagccatctc cactctcctt ctccagaacc cccttgaagg gcctttggga ccattagtcc 3060 atttccattt tacagacaag gaaatcaaga cccagcttgg gggaaaagcc acccctggag 3120 tcacctgtgt gttcagtggc acccccagcc tgggtcccct cctcccaata gaggctgagc cggagccagg gcagtatgag gtggggctgc cactgcccat acctcctcct cccttctttc 3180 3240 tttgaagcct aatggcccc caaaagatgg gcaggacaag ctgtagccca tctgagaggt 3300 tgggaaactg aggcccagaa acaggaagtg actcacacaa gacccctcag caagggtgca 3360 aagggggaag aactaggggc tccattgttc ttcaggcgac aggagaccgt tgctccagtg 3420 catgtctgct gggacaagga ttcctggcct cgaagccctg ggctgcacag ccctactggg 3480 ctccacctct ataaaccagt gacttctctg ggcctgggtc tgggggagag ggttgccagg gagactcagc tctccttggg ggctggccca gctgactgag ggtacacagg attgggtcta 3540 3600 gaccttgatg cctgggtgga gggcccttgt aaggggccat agcctcttca ggaccaactg gagggagagt taggaaacac cagctcctgc ctggggcagt gagggaatgg gagcagctgt 3660 3720 gggcgcctca tttcaggcaa gtcctcccca aaccttcaga tgcagtgaga cctggccttc ctgttgtgct tttcagactt tgttttcaga atgcttttat ctcgagtgtg cccttcggcc 3780 3840 cttacaagag cccctgggga gtaggtggtg gcctgtgccg tcatccccat ttcaaagcag 3900 ggagctgagg tcctgggagg ggaaagtgct tgcctgaggt cccactgtgt tagtgggtgg 3960 gcaggactgg aactcggttc tccaacagcc cagagctcac tcttttacac ccagaggtgg 4020 agcaggtggc ttagggggtg gttatgtact tcacaagcca attcccttca gccaggagct 4080 cctgggtgca tttccgtgtc agaaacagta ccgagtccca cccctctgg aggcacagct 4140 gttgcgtcag gcaaggtcac ctgcatttat ttattgagca gcagtgctgt gtcaggccca 4200 gggaccgagc ccctctccct gttcccctat ggtgtctccg aggccctctg ggagggcccc 4260 acatctggag cagcacctca gagtggacag aaagcattag cgtccacgag ctcacccgac 4320 gccgagcctg tgaggtgggc tgatggtgcc cgtctaaccc agcgcttcag ggaggtcaga 4380 atggagccga acccagggct gtgagcatca cctctggagc cctttcactt tatgactgct

tcctggacgg gtggtgggaa ggcaggagcc tgggtcctta ggctgggggc ctctctccat 4440 ccacccacct ttccctcatt ccctctttg gagcagcagc cgcccaggcc tttagggagg 4500 gagggtttct ggggcccttg ggttggagtg gggtcgcgtt gcattgtgtt catgaccatg 4560 tagctcatgt tgaaattaaa gtttttggct tttct 4595

<210> 204

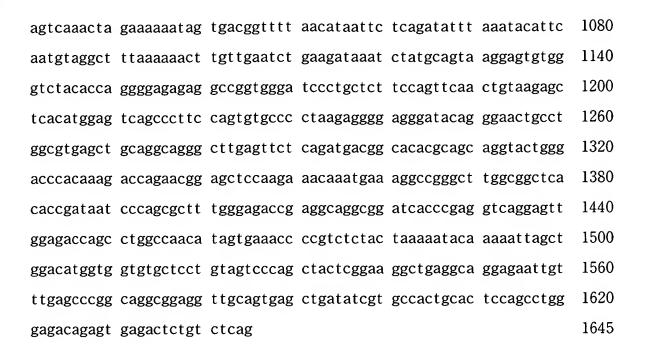
<211> 1645

<212> DNA

<213> Homo sapiens

<400> 204

60 catgtgtgca catgcatgca cataaacagg caagcacaca cgtacacatt acacacaca 120 gcaggcactc atgcacagac tcatacacag ggcacgtacc tgcacgcacg tgtacacaca 180 cacacgcaca ggcactcatg cacagatgca cgcatacaca gggcatgtac cttcacacac 240 gtgtaaacac acgcacaggc actcatgcgg atgcacgcat acacagtgca agtacctgca 300 cacgtgtaca catacacgca catgcaggca ctcatgcaca gatgcataca cagtgcacat 360 acctacacac acgtgtacac acacacacge acaggcacte atgcccagat gcaaacatac 420 actgcacata cctgcacaca cgtgcacaca cacacgcaca ggcactcatg cagacgtatg 480 cacagtgcac gtacctgcac acacgtacac acacacacac acaggcactc atgcacagat 540 gcacgcatac acagtgcacg tacctgcaca cacgtgtaca tgcacacaca gtcccgtaaa 600 tgcacgetta cateegtaat aetgatgaag tettteaaac aaccaaceae tetacageae gtttttagac tctcagcacc aatttatacg taagcttaac cgccttgtcc tccaatcatc 660 720 cattaaagga tggtaagtta agcattgtaa atgttattat tcaaagttgg tttgatctcc 780 cagctcgggg gatgctgtgt tacctgtgcg ccccgggagt aggagcggaa tatggtacaa 840 aatcttccct ggcctgaagt atccctggaa aagatgttgg agaccattaa gaagaaacca 900 gtgcttcttc ctgacaacag gttctggaac ttcagagcca cagcaagtgc accacacac 960 cgccagtcag cagccaccac gccgccagcg tgagacccca acaaaacttt ccaatgtccc 1020 cgaagggatc cgggtgttgg gatgtcctcc caggctcatg ctcttctctg tcatttaaaa



<210> 205

<211> 4051

<212> DNA

<213> Homo sapiens

<400> 205

gcgagtggag ctctgaagaa gctctgagcg gagttgtgtt cttccccagg tgcgtcctgg 60 120 ctgagagttg gagctctcca gcaacatgcc tgagcagagt aacgattacc gggtggccgt 180 gtttggggct ggcggtgttg gcaagagctc cctggtgttg aggtttgtga aaggcacatt 240 ccgggagagc tacatcccga cggtggaaga cacctaccgg caagtgatca gctgtgacaa 300 gagcatatgc acattgcaga tcaccgacac gacggggagc caccagttcc cggccatgca 360 geggetgtee atetecatta ecageegaca gteettggag gageteaage eeatetaega 420 acaaatctgc gagatcaaag gggacgtgga gagcatcccc atcatgctgg tggggaacaa 480 gtgtgatgag agccccagcc gcgaggtgca gagcagcgag gcggaggcct tggcccgcac 540 atggaagtgt gccttcatgg agacctcagc caagctcaac cataacgtga aggagctttt 600 ccaggagctg ctcaacctgg agaagcgcag gaccgtgagt ctccagatcg acgggaaaaa

P.

gagcaagcag cagaaaagga aagagaagct caaaggcaag tgcgtgatca tgtgaaggcc 660 cttcctgcgg gaggagcagc tgtgtgtccc cggcacctca ctcccccaaa atgacaccca 720 ccgtcgtcag ggtagcatgt ataatgccca cgtgttaaac attgcattta atcgagatgc 780 gtcctattgt ccttaagagg gcgtttcaca ccaccaacag taagccaccc actctggagt 840 cacagaatct gccaggcggt tcaagtgaaa accaacaca tcagcatccc tgggaactga 900 gaggtgccag caattgctga aggtggcgat gaacacccga aggtgggagg gaggactggt 960 acccacaaag caacatgtac cgagaggact aaatgtcatc tacgtgcatg tgagagcgtg 1020 ttaacctaga gttacctgca ccaaccccag acagaagcca atcacatctt tgggggaggg 1080 gaggggcagg aagaggtgag aagatcagat ggtccaaagt ggaccacact tggtccattt 1140 tacacttttt taaaggggat taaaaaaacac agcctctccc ccaaagggtg tccgttctta 1200 attcccacct ggcctgttag gagccttgct accctgaggg gatgtgttca ccttacctag 1260 acctagttag gaagtatcat tttaagctat tagagtattt atcttcatgt gcagggataa 1320 gtgcactaac agtgtgctgc tctgtcggaa gttcttcagt ttttaagtga ggatatcgtg 1380 acagtattaa aacatcgcaa taatgttcct gtgtgttata catcgagggt tttagaaatg 1440 tgattttctt cttttgacct gtgaggagta taacttcttt cagccctcag attttaaata 1500 caagcaaata aactcactat ttttagacgt ttttttcctc caaggtggtt ttcttcttt 1560 aaataactcg atctgtaccc agctgggtag cagccagcaa aggccatcag acaaccagaa 1620 gcacatccat ttttgtagtg tcacaaacat gtatatgcca cactttgcac cttaatgaaa 1680 tactttgaaa cagaagttat tcactgtgtt tttgatgatc tatctgtatt ggaaatatgt 1740 tcctggaaaa tgcatttaaa taatagtaaa ttctcttgca tgttccatta tacgtgtctt 1800 ctaagagetg tteaatacag tatteactet agaaacaatt atettttet ettaatgatt 1860 ttgtgtgcat ctttaatctt tcaagccaaa ttacagctat ttcaggtttc ctgtgttagc 1920 ttggggatag gatggtggct ggagacaggc aggcttctct gccctgggaa gagcccactc 1980 agcttaattg ctctgccatc gtagagcctg gttggacttg gcttcctgaa aactcccact 2040 gatagtgcct gttagatctc ctgtttgttt cagttggcag aacatttact ggccccaact 2100 gtggcatcat cctctcagca gtcttcctgt cacccgcctg gcaggcagaa ggagctgcag 2160 tcctacgtgg gcctgcctgg gggggtgggg gctgcatggc tgttgggtgg cagtgtcagc 2220 acagggaggg cttaagttgg ggatgtttga ccaggccacc tcctgcaact gctgtttctc 2280 ctgtccctcc tatgcagggc ttgcagcagc agcagtgtgg ccatctccat cccccaaagc 2340